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ABSTRACT

The document presents anticipated needs and costs for training military personnel in FY 1976, based on national security objectives. Training loads for each of the following categories are presented with supporting tables: (1) recruit training, (2) officer acquisition training, (3) specialized skill training, (4) flight training programs, and (5) professional development education. The manpower requirements are explained based on the relationship between the training loads required by a Service and the workloads which represent training conducted by the Service. An outline of the organization for the management of individual training within the Department of Defense and a list of the major facilities where training and education activities are conducted are presented, as well as estimates of training funding and costs. Some of the ways to achieve a balance between operational requirements and conservation of training resources are discussed. A summary of the amount and types of training of Reservists and Guardsmen conducted by active training establishments is included. Appended materials include brief information on: (1) summary trail of training categories realignments, (2) determining training requirements, (3) civilian training, and (4) summary of total funding for individual training and education. (Author/EC)

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MILITARY
MANPOWER
TRAINING
REPORT
FOR FY 1976

DEPARTMENT OF DEFENSE
March 1975

Prepared By

Office of the Assistant Secretary of Defense
(Manpower and Reserve Affairs)

CE 006 442

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Revised, March 6, 1975

PREFACE AND SUMMARY

The Military Manpower Training Report of the Secretary of Defense is submitted to the Congress in accordance with 10 U.S.C. 138(d)(2), which states:

> The Secretary of Defense shall submit to Congress a written report, not later than March 1 of each fiscal year, recommending the average student load for each category of training for each component of the armed forces for the next three fiscal years, and shall include in that report justification for, and explanation of, the average student loads recommended.

In compliance with the law, this report presents the recommended military student training loads for the Department of Defense for Fiscal Years 1976 through 1978. The report specifically supports the Department of Defense request for authorization of average military student training loads for each component, active and reserve, of each Service for Fiscal Year 1976, the transition fiscal period (FY 197T, covering the period July 1 to September 30, 1976) and Fiscal Year 1977. Requested training loads for these three periods are shown in the following table.

Requested Training Loads, FY 1976, 197T, 1977

	FY 1976	FY 197T	FY 1977
Active Components			
Army	83,101	75,185	86,341
Navy	69,513	70,571	70,978
Marine Corps	26,489	26,788	25,993
Air Force	51,225	52,280	50,999
Reserve Components			
Army National Guard	9,788	9,481	10,158
Army Reserve	7,359	5,518	7,495
Naval Reserve	1,661	2,106	2,099
Marine Corps Reserve	2,769	4,088	2,935
Air National Guard	1,952	2,180	2,084
Air Force Reserve	810	836	771

The requested loads are consistent with the President's Budget for FY 1976 and the Department of Defense request for authorization of military manpower strengths, active and reserve, both submitted to the Congress in February 1975.

Definitions and Explanation of Training Loads

This report discusses the training and education of individuals within the Department of Defense, as opposed to the training of operational mission units or crews. Individual training and education, for purposes of this report, are divided into five categories:

- Recruit Training, given to all enlisted entrants to the Services who have not had previous military service.
- Officer Acquisition Training, which leads to a commission in one of the Services.
- Specialized Skill Training, needed to perform specific jobs in the Military Services.

- Flight Training, primarily for prospective pilots and navigators before they receive an initial operational assignment.

- Professional Development Education, relating to the professional duties of senior military personnel or in advanced academic disciplines to meet Service requirements.

"Training loads" are the average numbers of students and trainees participating in formal individual training and education courses during the fiscal year. For a full fiscal year, training loads are the equivalent of student/trainee manyears for these participants, including both those in temporary duty and permanent change of station status.

The requirement for training in a base-line force is derived from the need to replace losses in each skill required in the military force structure. Losses, through separations, promotions and other causes, are projected at various points in the future and compared to the projected inventory of trained personnel. The deficit between the requirement in each skill and the inventory becomes a demand for an output of trained personnel. A phased input of students to the training establishment is then scheduled so that trained personnel, in each skill and skill level, are available at the proper time to replace the losses in those skills. The workload placed on the training establishment is the basis of the training loads addressed in this report. The training load for each component is the measure of the amount of training required for the members of that component, although some of the training will be done by other Services, in DoD schools, or in some cases by institutions outside the Department of Defense. The training of members of the Reserve Components included in the report is the formal school training provided by the active training establishment to individual members of the Reserve Components while they are on active duty for training, primarily non-prior service personnel entering the Reserve Components.

An Overview of Training Loads

During each of the fiscal periods from FY 1976 through FY 1977, total requested DoD training loads will range between approximately 249,000 and 260,000. About 90 percent of these annual loads is composed of training for members of the active forces; the remaining 10 percent of these loads is training for members of the reserve components, while on active duty, conducted by the active training establishment.

The following table displays the percentage of total active force loads and the percentage of total reserve component loads attributable to each of the five major categories of training in FY 1976.

Percent Distribution of Training Loads, FY 1976

Training Category	Active Forces	Reserve Components
Recruit Training	29%	40%
Officer Acquisition Training	7%	2%
Specialized Skill Training	55%	56%
Flight Training	3%	1%
Professional Development Education	6%	1%
Total	100%	100%

It will be noted that the preponderant categories of training, in terms of training loads, are Recruit Training and Specialized Skill Training, both of which are strongly influenced by the number of enlisted non-prior service accessions to the force. Other types of training -- all of Officer Acquisition Training, for example -- are also driven by the number of new accessions to the force. The following table divides the requested training loads for FY 1976 into two parts: training which is accession-related, and is conducted for the purpose of turning a civilian into a qualified Service member with a usable military skill; and other training, which, for the most part, is conducted for the purpose of preparing members in later stages of their military careers for more demanding duties.

Active Force Accession-Related Training and Other Training Loads, FY 1976[a]

(Thousands)

	Army	Navy	Marine Corps	Air Force	Total
Accession-Related Loads					
Recruit	23.6	19.2	13.5	9.8	66.1
Officer Acquisition	4.8	6.5	.5	5.7	17.5
Initial Skill (Enlisted and Officer)[b]	33.0	22.5	8.8	21.6	85.9
Undergraduate Flight[c]	.7	1.4	.6	2.2	4.8
Subtotal	62.1	49.6	23.4	39.2	174.3
Other Loads					
Other Specialized Skill	16.3	16.1	1.9	6.6	41.0
Other Flight	.1	-	.3	.4	.8
Professional Development	4.5	3.8	.8	5.0	14.2
Subtotal	21.0	19.9	3.1	12.0	56.0
Total Loads	83.1	69.5	26.5	51.2	230.3
Accession-Related Training as Percent of All Training	75%	71%	88%	77%	76%

a/ Numbers may not add due to rounding.

b/ In some cases, includes some training for prior-service personnel or personnel who receive the training at a later stage.

c/ Includes Flight Familiarization Training.

As the table shows, active force training related to new accessions amounts to about 76 percent of all training programmed for FY 1976; only about 24 percent is for subsequent training. The comparable proportions for the reserve components are 85 and 15 percent. With minor exceptions, the same relationship also holds for the requested loads for FY 197T. The concentration on accession-related training demonstrates the priority the Services place on training intended to produce new Service members who are motivated, amenable to discipline, and capable of productive service as members of military organizations.

Taking a longer view, the following table compares actual active training loads in FY 1974 with those programmed for FY 1976.

Active Force Training Loads by Service,
FY 1974 and 1976[a]
(Thousands)

	FY 1974	FY 1976	Change, FY 1974-76	
			#	%
Army	84.1	83.1	-1.0	-1
Navy	67.8	69.5	+1.7	+3
Marine Corps	26.4	26.5	+0.1	*
Air Force	54.6	51.2	-3.4	-6
Total	232.9	230.3	-2.6	-1

* Less than 0.5 percent.

a/ Numbers may not add due to rounding.

The reduction from the loads originally planned for FY 1974 is actually somewhat greater, since some Services had recruiting shortfalls in FY 1974 or large enlistments late in the year, in effect transferring some FY 1974 loads to FY 1975. For DoD as a whole, loads in FY 1976 are 16 percent lower than in FY 1973. Navy data indicate that they will have more new non-prior service entrants in FY 1976 than in FY 1974, thus contributing to higher loads in FY 1976. The reduction in Air Force is primarily due to a reduction in Flight Training and shorter average course lengths in Specialized Skill Training.

The following table compares FY 1974 and 1976 active force training loads by the major categories of training and education.

Active Force Training Loads by Training Category, FY 1974 and 1976[a/]

(Thousands)

	FY 1974	FY 1976	Change, FY 1974-76	
			#	%
Recruit	64.5	66.1	+1.6	+ 2
Officer Acquisition	18.5	17.5	-1.0	- 5
Specialized Skill	124.8	126.9	+2.1	+ 2
Flight	7.5	5.7	-1.8	-24
Professional Development	17.6	14.2	-3.4	-19
Total	232.9	230.3	-2.6	- 1

a/ Numbers may not add due to rounding.

The most notable proportional changes are the reductions in (a) Flight Training, based on refinements of estimates of mobilization requirements for aviators, and of available aviator inventories; and (b) Professional Development Education. These two categories of training, while small in terms of load, are high in cost per unit of load.

A similar comparison of total reserve component loads, by category of training, is shown in the following table.

Total Reserve Component Training Loads FY 1974 and 1976[a/]

(Thousands)

	FY 1974	FY 1976	Change, FY 1974-76	
			#	%
Recruit	5.7	9.6	+3.9	+69
Officer Acquisition	0.5	0.6	+0.1	+14
Specialized Skill	8.5	13.6	+5.1	+67
Flight	0.3	0.2	-0.1	-33
Professional Development	0.3	0.3	*	+14
Total	15.4	24.3	+9.0	+58

*Less than 50.

a/ Numbers may not add due to rounding.

The difference between the two years is almost entirely in Recruit and Specialized Skill Training, and is the result of recruiting shortfalls in FY 1974, when less than half of the programmed non-prior service accessions were actually enlisted. Recruiting experience to date in FY 1975 is much closer to the programmed quantity.

Combined training loads, active and reserve, for FY 1974 and FY 1976 are as follows:

Total Training Loads, All Components
FY 1974 and FY 1976[a]
(Thousands)

	FY 1974	FY 1976	Change, FY 1974-76	
			#	%
Recruit	70.3	75.7	+5.5	+ 8
Officer Acquisition	19.0	18.1	-0.9	- 5
Specialized Skill	133.3	140.5	+7.2	+ 5
Flight	7.8	5.8	-2.0	-26
Professional Development	17.9	14.5	-3.3	-19
Total	248.2	254.7	+6.5	+ 3

a/ May not add due to rounding.

As shown, due to the combined effects of the factors previously discussed, the dominant one of which is the reserve non-prior service recruiting shortfall in FY 1974, total training loads are about 3 percent higher in FY 1976 than in FY 1974.

Training loads for each of the five major categories of training are discussed in detail in Chapters III through VII.

An Overview of Training Resources

The resources in manpower, facilities, and funding required to execute the requested training loads in FY 1976 are discussed in detail in Chapters VIII, IX, and X.

To carry out the training mission, military and civilian manpower is needed to perform a variety of functions: to conduct instruction; to feed, house and otherwise support the students and the other members of the training establishment; to operate and maintain equipment used in training; to administer and manage the training establishment. A total of about 230,000 military and civilian personnel (not including students) will be required for the conduct of the individual training mission in FY 1976. The following table displays this manpower by Service.

Military and Civilian Manpower in Support of
Individual Training, FY 1976[a/]
(End Strength, Thousands)

	Army	Navy	Marine Corps	Air Force	DoD
Military	60.0	35.9	14.3	39.4	149.5
Civilian	44.2	13.4	2.2	19.0	78.8
Total	104.2	49.3	16.5	58.4	228.4

a/ May not add due to rounding.

The next table shows the allocation of the same manpower to each of the five major categories of training.

Total Military and Civilian Manpower In Support
of Individual Training, FY 1976[a/]
(End Strength, Thousands)

Training Category	Military	Civilian	Total
Recruit Training	21.5	12.5	34.0
Officer Acquisition Training	6.7	7.0	13.7
Specialized Skill Training	83.8	42.5	126.3
Flight Training	32.8	11.6	44.4
Professional Development Education	4.8	5.1	9.9
Total	149.5	78.8	228.4

a/ May not add due to rounding.

A heavy investment in manpower in support of training is required by the nature of military training, as shown by the following factors:

- The training establishment operates at an intensive pace in order to keep students in training for as short a time as possible, since the students must be paid while in training and are not available to the operating force. The training establishment, for the most part, also operates on a continuous basis throughout the year.
- Much military training requires intensive supervision because of the amount of "hands-on" training conducted, safety considerations in training involving weapons or dangerous equipment, and the need for control to impart discipline, as in Recruit Training.
- Much complex equipment -- aircraft, tanks, radars, etc. -- are used in training, and manpower is required to service and maintain the equipment, as well as to instruct in its use.
- Manpower is required to operate training centers, most of which are self-contained and self-sustaining.

The following table compares manpower in support of individual training at the end of FY 1976 with that at the end of FY 1974.

Military and Civilian Manpower in Support of Training, FY 1974 and 1976
(End Strength, Thousands)

	FY 1974	FY 1976	Change #	Change %
Army	116.2	104.2	-12.0	-10
Navy	49.7	49.3	- 0.4	- 1
Marine Corps	17.7	16.5	- 1.2	- 7
Air Force	62.5	58.4	- 4.1	- 7
DoD	246.1	228.4	-17.7	- 7

As shown, manpower in support of training declines by 7 percent. By way of comparison, total programmed training loads are about 3 percent larger in FY 1976.

The principal sites and facilities at which this training is conducted are shown in Chapter IX, which also outlines the management structure used to oversee the conduct of training.

Funding required to support the training in the training load request for FY 1976 totals approximately $6.9 billion, of which about 38 percent is made up of pay and allowances for the students undergoing training. The remainder includes pay and allowances of military and civilian personnel in support of training, operations and maintenance costs, and training-related procurement and construction funded in FY 1976. The following table displays total training funding for each Service.

Aggregate Funding of Individual Training
by Service, FY 1976
($ Millions)

Army	Navy	Marine Corps	Air Force	DoD
3,100.8	1,700.8	431.5	1,641.1	6,874.2

The same funding is shown below attributed to each of the five major categories of training.

Aggregate Funding of Individual Training
by Training Category, FY 1976[a]
($ Millions)

Recruit Training	1,290.2
Officer Acquisition Training	357.7
Specialized Skill Training	3,552.2
Flight Training	1,154.1
Professional Development Education	519.9
Total	6,874.2

a/ May not add due to rounding.

Significant Actions in Training and Education

In the recent past, a number of significant actions have occurred in the field of individual training and education. Some of the more important are summarized below.

- Flight Training loads have been reduced by 24 percent between FY 1974 and 1976, largely by refinements of requirements for aviators under approved contingency plans and inventories of active and reserve aviators available to fill these requirements.

- Loads for fully-funded graduate education for officers in FY 1976 will be 28 percent lower than in FY 1973. Controls over all aspects of the program have been strengthened.

- A Committee on Excellence in Education, chaired by the Deputy Secretary of Defense and including as members the three Secretaries of the Military Departments, is currently reviewing the educational programs of the Department of Defense, including most of those carried in this report under Officer Acquisition Training and Professional Development Education. The Committee's objective is to insure that educational requirements of the Department are being met in ways which are educationally sound and at costs which are reasonable.

- The Department is continuing to exploit technological advances which have the potential to produce better training, resource savings, or both. The most notable effort is in the development and procurement of flight simulators to substitute, wherever feasible, for flight in actual aircraft in training. A major procurement program, which follows up an initial effort in FY 1975, is included in the FY 1976 budget request. These simulators, when available, have great potential both for improved training and reduced flying costs.

- Other efforts are continuing to meet training requirements at reasonable cost. One method used by all the Services is job task analysis. This technique determines, through surveys and analysis, the actual tasks performed in a military skill. The formal course that teaches this skill is then designed to teach these tasks, leaving less essential knowledge to be learned on the job or in subsequent training. Other methods, including self-paced learning and a wide use of audio-visual techniques, contribute to better training and lower training costs.

The Role of Individual Training and Education

About 77 percent of all training and education in the Department of Defense is conducted for the purpose of training new entrants to the service to the point where they are capable, through experience on the job, of being productive members of military organizations. The remaining 23 percent imparts more advanced skills and knowledge to personnel with some experience in their Service and insures the continuous development of officers and enlisted personnel who are capable of assuming tasks of greater responsibility. Individual training and education as a whole is an indispensable foundation of military readiness for the Total Force, both active and reserve. The training discussed in this report is patterned to insure that skilled and motivated personnel are available to meet the requirements of national security.

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I

INTRODUCTION

Training Requirements and Manpower Requirements

Requirements for training and education of military personnel are derived ultimately from basic national security objectives. This report, together with a companion report, the Department of Defense Manpower Requirements Report, describes the progression from national security objectives to training load requirements. The Manpower Requirements Report explains the relationship between the threat, the forces designed to cope with the threat, and the requirement for trained manpower to man these forces. The Military Manpower Training Report takes as a starting point the requirement for trained military manpower described in the Manpower Requirements Report. It then describes how these requirements relate to the demand placed on the military training establishment to supply this trained manpower, and how this demand leads to the DoD request for military student training load authorizations for each component of the

Military Services. The two reports are mutually supportive; however, in some cases the data in the reports are not interchangeable or directly comparable. The principal reason for this difference is that the main focus of the Manpower Requirements Report is upon requested strength on the last day of fiscal years (that is, end strength), whereas the main focus of this Military Manpower Training Report is upon requested student loads, a concept more comparable to average strength than to end strength.

Definition of "Individual Training and Education"

This report addresses the "individual training and education" activities of the Department of Defense. These involve the training of individual military members in formal courses conducted by organizations whose predominant mission is training; this training is to be differentiated from training activities conducted by operational units incidental to their primary combat, combat support, or combat service support missions. "Force support training", the training of organized crews and units for the performance of specific missions, generally is not included in the training loads discussed in this report, but is discussed in Chapter VII of the Manpower Requirements Report. In certain categories of training, on-the-job training (OJT) in units supplements or substitutes to some extent for all or part of formal course training requirements; OJT is not included in the training loads discussed in this report.

The purpose of individual training and education is to give the individual Service member the skills and knowledge which will qualify him or her to perform effectively in subsequent assignments as a member of an operational military organization. "Individual training and education" includes all formal military and technical training and professional education conducted under centralized control, generally under the supervision of a Service training command or similar organizations. The trainees and students undergoing the training or education addressed in the report include the following categories of personnel:

1. Active Force: officers, enlisted personnel, and Service Academy cadets and midshipmen.

2. Reserve Components: officers and enlisted members on active duty for training in formal school courses.

Training of some civilian students in ROTC and similar programs is also discussed in the report. Training loads are requested only for training and education of personnel received while they are in active military status. In general, the training discussed in this report is conducted under Major Defense Program VIII, "Training, Medical and Other General Personnel Activities", as presented in the Defense budget. Exceptions to these general rules are pointed out, where appropriate, in the body of the report.

Personnel undergoing individual training and education are classified, for manpower accounting purposes, as either trainees, students, or cadets. The term "trainee" is used for all personnel in Recruit Training and, in addition, at the present time, for Army members in Advanced Individual Training and Navy members in Apprenticeship Training. "Cadets" are members being educated at one of the Service Academies. All others receiving individual training and education are identified as "students". The distinction is not important for the purposes of this report, and the term "student" will be used where appropriate to describe members of all three classifications.

The term "training" generally refers to instruction in military subjects either at a basic level, as in Recruit Training, or in a military or job-related technical specialty, such as pilot training or training in radar repair. "Education" has a broader connotation, generally referring to study either in more advanced subjects or in military subjects which apply to an entire Service or to the broad mission of national security. The term "training" will be used in this report to refer to individual training and education as a whole.

FY 1976 Training Report and the FY 1976 Budget

It is important to emphasize that this report, while consistent with the Department of Defense portion of the President's Budget for FY 1976, differs in structure from the budget justification for FY 1976 and previous years in two major respects. Budget justifications are focused on explaining how, by whom, and why money is to be spent; budgets for training and their justifications, therefore, are prepared by the Service which conducts the training programs and must obtain funds to train personnel from other Services in addition to its own. By contrast, this report focuses on the training loads of the parent Service component whose members are undergoing the training, and deals only in summary with resources and funds required by the Service which conducts the training. For example, Navy personnel being trained by the Air Force are treated in this report as part of the Navy training load, since they are being trained to fill Navy requirements.

Secondly, this report, like the Training Report for FY 1975, uses standardized categories to describe the Service training and education programs. Budget justifications use the conventional categories utilized over the past several years in budget presentations. The major variations between Training Report and budget categories are pointed out in the following sections.

Definitions of Major Training Categories

The portion of this report which discusses training loads in detail is organized into five chapters (Chapters III through VII), each of which addresses one of five major categories of training. These major categories are briefly defined below. Each chapter will more fully describe the training category and its sub-categories, the requested training loads, and the training methodology.

Recruit Training includes the basic introductory physical conditioning, military, and indoctrination training given to all new enlisted entrants in each of the Services.

The Army, in its Recruit Training budget justification, also includes advanced training conducted in Army Training Centers which is oriented toward specific skills. The Navy treats Apprenticeship Training the same way. To foster comparability among the Services, this report excludes these types of training from Recruit Training, because they are oriented toward specific skills, and uses the term Recruit Training to represent only the training given to all new Service members.

Officer Acquisition Training includes all types of education and training leading to a commission in one of the Services, such as the programs of the Service Academies and officer candidate schools.

Service budget justifications carry officer candidate schools in specialized training, and other enlisted commissioning programs and medical officer acquisition programs in professional training.

Students not in active military status, such as Reserve Officer Training Corps students, are excluded from requested loads.

Specialized Skill Training provides officers and enlisted personnel with new or higher levels of skill in military specialties to match specific job requirements.

For purposes of this report, this category includes Army Advanced Individual Training and Navy Apprenticeship Training; much of the former and all of the latter are carried in budget justifications as part of Recruit Training. Certain flight-related training which normally has been carried in Flight Training for budget purposes, such as training of air traffic controllers and some aircraft mechanics, and survival training in the Air Force, is reported here under Specialized Skill Training. As noted above under Officer Acquisition Training, none of the officer acquisition programs are included in Specialized Skill Training in this report.

Flight Training provides the basic individual flying skills needed by pilots, navigators, and naval flight officers before their assignment to operational mission units. The Service undergraduate flight training programs culminate in an officer, or an Army warrant officer, receiving "wings" and being categorized as a "designated" or "rated" officer.

These undergraduate programs do not include the major formal advanced combat crew training programs, which have not uniformly been classified as individual training by the Military Services. Some of the training conducted by Service advanced flight training organizations is not individual training and is therefore beyond the scope of this report. Certain flight-related training, considered as part of Flight Training for budgetary purposes, is carried in this report under Specialized Skill Training.

Professional Development Education includes educational courses conducted at the higher-level Service schools or at civilian institutions to broaden the outlook and knowledge of senior military personnel or to impart knowledge in advanced academic disciplines to meet Service requirements. Programs include graduate and undergraduate education and other courses not leading to a degree.

All officer acquisition programs are excluded from this category in this report and instead are included under Officer Acquisition Training. Enlisted leadership training for senior non-commissioned officers is included in Professional Development Education rather than in Specialized Skill Training to recognize its broad professional content.

Appendix A contains a table showing the relationships between these FY 1976 Training Report categories and categories used in the FY 1976 budget justification by the Services. The table also lists some relatively minor adjustments made in the Training Report categories since publication of the FY 1975 Training Report.

Determining Training Requirements and Training Load

The amount and type of training to be conducted in the Department of Defense is the product of a series of calculations which is described in Appendix B to this report.

In brief, the process begins with the determination of the requirement for military personnel with specific skills to fill the positions in the approved or projected force. The requirement for trained manpower must then be measured against the projected available inventory of trained personnel at various points in the future. This comparison, made for each military skill and skill level, establishes the need for the training of personnel, on a phased basis, to fill current and projected skill shortages. The requirement for the training of personnel on a schedule calculated to maintain the skill inventory becomes the workload of the Service training establishments, and is measured in terms of the average military training student load, or "training load". The training load for a given period is not only a measure of the amount of training to be accomplished; it is also the basis for establishing the requirement for resources (manpower, funds, materiel and facilities) needed to support the training.

Conceptually, the training load for a given period is the average student strength for the period, and approximates manyears (or, in the case of the three-month FY 197T, "man-quarters"). The total training load is the sum of the loads for all the included individual courses. Training loads for individual courses are determined by the following factors:

1. The length of the training course.

2. The desired number of graduates, or output, of the course.

3. The number of entrants, or inputs, into the course required to obtain the desired output. This, in turn, depends on the pattern of attrition, or failures of entrants to graduate, for the course.

If attrition occurs at a constant rate during a course, the training load is computed by the following formula:

$$\frac{\text{Entrants} + \text{Graduates}}{2} \times \text{course length (expressed as a fraction of a year)}$$

This is the basic method for computing the training loads discussed in this report. However, if attrition does not occur at a uniform rate, as is frequently the case, and the rate and phasing can be estimated, more complex formulas and computer simulations are used to compute training loads.

Accuracy in Projecting Training Loads

In accordance with law, training load authorizations must be requested well in advance of the period when the training is actually conducted. This year, for the first time, load authorizations must be requested for the fiscal year which begins more than a year after the request is submitted -- that is, loads for FY 1977, beginning October 1, 1976, must be requested in the spring of 1975. This statutory requirement implies the necessity, and the capability, to predict future training loads with precision. In actuality, while loads for some long-leadtime programs, such as professional education, can be predicted with considerable accuracy, there are many uncertainties in projecting training loads. Some of the causes of uncertainty are:

1. Unpredictability of individual decisions to enlist or reenlist; this factor may lead to unanticipated changes in the skill inventory,

requiring changes in the composition or size of training loads, or to shifts of portions of the training load from one fiscal period to the following period.

2. Unanticipated changes in force structure, requiring a readjustment of the skill inventory and the mix of courses in the training load.

3. Changes in attrition rates and patterns, causing unprogrammed fluctuations in training rates and loads.

Through forecasting training needs as far as possible into the future and continuous review and adjustment of training inputs and loads, the Services are able to adapt the training system to changing conditions. However, it should be clear that extended projections are subject to error; adjustments are inevitable and, in fact, necessary for sound management.

Training Load Request by Component and Category.

The tables on the following three pages display the requested training loads for each fiscal period: FY 1976, FY 197T, and FY 1977. The loads for each period are displayed by component and by each of the five major categories of training.

Average Military Training Student Loads, Fiscal Year 1976
By Component and Major Training Category

	Recruit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces						
Army	23,570	4,838	49,364	785	4,544	83,101
Navy	19,170	6,488	38,633	1,409	3,813	69,513
Marine Corps	13,549	485	10,702	919	834	26,489
Air Force	9,825	5,667	28,200	2,554	4,979	51,225
Sub-Total Loads	66,114	17,478	126,899	5,667	14,170	230,328
Reserve Components						
Army National Guard	4,034	2	5,644	36	72	9,788
Army Reserve	2,490	131	4,600	15	123	7,359
Naval Reserve	337	126	1,165	-	33	1,661
Marine Corps Reserve	1,763	347	641	-	18	2,769
Air National Guard	644	1	1,168	100	39	1,952
Air Force Reserve	364	12	347	29	58	810
Sub-Total Loads	9,632	619	13,565	180	343	24,339
DoD Total Loads	75,746	18,097	140,464	5,847	14,513	254,667

Officer Acquisition Enrollees Not in Active Military Status, FY 1976 a/

	College ROTC Programs	Armed Forces Health Professions Scholarships Authorized b/
Army	41,221	1,850
Navy	8,100	1,575
Air Force	18,209	1,575
DoD Total Enrollees	67,530	5,000

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a/ Excluded from loads shown in the table above.

b/ The number of scholarships authorized is consistent with average annual enrollments shown in budget documents.

Average Military Training Student Loads, Fiscal Year 197T
By Component and Major Training Category

	Recruit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces						
Army	25,650	4,852	39,945	752	3,986	75,185
Navy	21,688	6,492	37,949	1,329	3,113	70,571
Marine Corps	13,608	512	11,272	912	484	26,788
Air Force	10,908	6,320	27,132	2,800	5,120	52,280
Sub-Total Loads	71,854	18,176	116,298	5,793	12,703	224,824
Reserve Components						
Army National Guard	[illegible],514	2	4,870	22	73	9,481
Army Reserve	1,860	101	3,424	10	123	5,518
Naval Reserve	424	84	1,561	-	37	2,106
Marine Corps Reserve	2,088	936	1,008	-	56	4,088
Air National Guard	712	-	1,340	96	32	2,180
Air Force Reserve	388	16	328	32	72	836
Sub-Total Loads	9,986	1,139	12,531	160	393	24,209
DoD Total Loads	81,840	19,315	128,829	5,953	13,096	249,033

Officer Acquisition Enrollees Not in Active Military Status, FY 197T a/

	College ROTC Programs	Armed Forces Health Professions Scholarships Authorized b/
Army	48,085 c/	1,850
Navy	8,820 c/	1,575
Air Force	18,914 c/	1,575
DoD Total Enrollees	75,819 c/	5,000

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a/ Excluded from loads shown in the table above.

b/ The number of scholarships authorized is consistent with average annual enrollments shown in budget documents.

c/ Estimated initial enrollment 1976-77 school year.

Average Military Training Student Loads, Fiscal Year 1977
By Component and Major Training Category

	Recruit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces						
Army	25,490	4,686	50,891	818	4,456	86,341
Navy	20,328	6,583	39,842	1,310	2,915	70,978
Marine Corps	13,226	501	10,754	773	739	25,993
Air Force	9,825	5,686	27,859	2,656	4,973	50,999
Sub-Total Loads	68,869	17,456	129,346	5,557	13,083	234,311
Reserve Components						
Army National Guard	4,164	2	5,897	22	73	10,158
Army Reserve	2,810	131	4,421	10	123	7,495
Naval Reserve	361	84	1,631	-	23	2,099
Marine Corps Reserve	1,866	366	685	-	18	2,935
Air National Guard	686	1	1,260	98	39	2,084
Air Force Reserve	362	12	311	28	58	771
Sub-Total Loads	10,249	596	14,205	158	334	25,542
DoD Total Loads	79,118	18,052	143,551	5,715	13,417	259,853

Officer Acquisition Enrollees Not in Active Military Status, FY 1977 a/

	College ROTC Programs	Armed Forces Health Professions Scholarships Authorized b/
Army	45,250	1,850
Navy	8,100	1,575
Air Force	18,209	1,575
DoD Total Enrollees	71,559	5,000

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a/ Excluded from loads shown in the table above.

b/ The number of scholarships authorized is consistent with average annual enrollments shown in budget documents.

II

TRAINING PATTERNS

General

The development of Service members through formal training and education and practical experience follows a generally common pattern. The new Service member (or, in the case of some Officer Acquisition Training, the prospective Service member) first receives training designed to develop the basic attributes of all members of that Service. In most cases, the graduate of the initial training is then taught the skills required for a military job at the lowest skill level. Those Service members who do not remain beyond their initial enlistments or obligated terms of service do not, in most cases, receive additional formal training. Those who remain, the career members, will further develop their military knowledge and skills through experience in military jobs, interspersed, when appropriate, with additional formal schooling designed to prepare them for more responsible positions. During any part of their terms of service, military personnel are also encouraged, as their military assignments may permit, to improve their educational attainments, to the benefit of themselves and their Services. This combination of job experience, training and education is essential to the development of a military force which is capable of carrying out the national security mission.

Enlisted personnel usually work in relatively specialized skill fields, whereas the duties of officers, particularly of those in the career force, call for broader expertise. For these reasons, the training and education patterns of officers and enlisted personnel differ, and will be discussed separately in the following sections of this chapter.

Officer Training Patterns

Each Service has developed career patterns to prepare its officers to assume progressively higher command and staff responsibilities. These career patterns are composed of operational assignments, during which the officer learns his profession through experience, and periodic individual training and education, which provide the officer with knowledge and skills needed for progressively more demanding subsequent assignments.

Officer training and education can be divided generally into three types. First, each Service maintains a system of professional military education which is progressive in nature. This education is related more to the increasing responsibilities associated with career progression to more senior grades than to the individual's current assignment or specialty. It is primarily the study of officership and the command and staff knowledge required of all professionals. The second type of education and training includes the many specific skill-producing courses that are conducted to enable the officer to perform immediately upon assignment to a specialized or functional area. These courses vary in length from a few days to several months. They present, for the most part, strictly job-oriented training, and are often in the nature of orientation or refresher courses. Third, the Services also provide selected officers with advanced academic education, either in-house or at civilian institutions, to meet specific requirements for officers educated in the technical, scientific, engineering, and managerial fields. Officers also participate in a variety of other educational programs, many on a part-time basis, usually with the student sharing in the cost.

Training and education for career officers, involving one or more of the types of training and education described above, follows the general pattern outlined in the following paragraphs. The pattern varies among the Services to some extent, and not all officers will participate in all of the schooling described. The proportion of officers participating in schooling becomes progressively smaller and more selective as officers move through their careers.

Non-career officers (those who may be expected to serve only an initial tour of active duty) generally receive training only at the entry level. In some cases, they may receive skill-oriented courses such as pilot training, which is lengthy and results in a commensurately longer active duty obligation, or training as maintenance or communications officers.

Initial Skill Training. Upon entry, the young officer's initial training is Service-oriented and intended to prepare him for duties at the lowest operational level -- company, squadron, or ship. The newly commissioned Army officer will attend a basic course conducted by the particular branch of the Army to which he is assigned, such as infantry, armor or artillery. A Navy ensign is usually assigned aboard ship, although he may receive school training in a particular skill. The new Marine officer attends the Basic Officer School. A newly commissioned officer in the Air Force may go to Flight Training or training in a technical specialty.

Skill Progression Training. After some operational experience, the career officer requires further schooling to prepare him for service at the next level -- for example, as a unit commander or a headquarters staff officer. In the Army, this entails a return to his branch school for more advanced training. An Air Force officer could be selected for the Squadron Officer School. A Marine Corps officer would normally attend the Amphibious Warfare Course. Navy officers at this stage in their careers may attend a school in a specialty appropriate to their future assignments.

To satisfy Service requirements and as a further step in professional development, some officers are selected for participation in an advanced academic educational program at a civilian institution or one of the two Service technical institutes, the Naval Postgraduate School and the Air Force Institute of Technology.

Intermediate Service Schools. As the officer progresses (between six and 16 years of service, depending on Service criteria) he is ready for the next, or command and staff, level of professional schooling in preparation for assuming higher responsibilities. Attendance is competitive, as not all officers are selected to attend. Each Service has such a course; the Armed Forces Staff College, a joint school, is also conducted at this level.

Senior Service Schools. Subsequent to the intermediate years, little technical training is provided. The final level of professional military education is that of the Senior Service Schools -- the war colleges -- for which attendance is highly selective. The Army, Navy, and Air Force each has a war college. In addition, there are two joint colleges: the National War College and the Industrial College of the Armed Forces. Officers graduating from the Senior Service Schools have the academic foundation required for command and staff positions at the highest level.

Enlisted Career Patterns

All personnel entering upon an initial enlistment are provided Recruit Training that introduces them to military life. Following this indoctrination training, an individual will follow one of three possible avenues:

1. Initial Skill Training, which prepares the enlistee for an initial duty assignment, or

2. Direct duty assignment on the basis of a skill already acquired in civilian life, or

3. Direct assignment to first duty unit for on-the-job training (OJT).

The expected distribution of Active Recruit Training Graduates in FY 1976 is as follows:

Disposition of Active Recruit Training Graduates in FY 1976

	Army	Navy[a/]	Marine Corps	Air Force
To Initial Skill Training	94%	100%	64%	92%
To Duty Assignment (Civilian-Acquired Skill)	2%	*	*	2%
To Duty Assignment (On-the-Job Training)	4%	-	36%	6%

*Less than 1/2 of 1 percent.

a/ 30% of Navy Recruit Training graduates attend short "Apprenticeship Training" courses (carried under Initial Skill Training in this report) as a preliminary to further training on the job.

As the table indicates, most enlisted personnel receive formal Initial Skill Training to provide them with a basic military skill. The combination of Recruit Training and Initial Skill Training is the foundation of the development of enlisted personnel, because it turns the civilian into a Service member who is qualified to fill a position in a military unit. This combination of Recruit Training and Initial Skill Training accounts for about 65 percent of all student loads programmed for FY 1976 and about 82 percent of the loads programmed for enlisted personnel.

Other than for on-the-job training in the work environment, enlisted personnel normally receive no further formal training beyond Recruit and Initial Skill Training during their initial enlistments. The major exception is Navy training, conducted by fleet schools, in such shipboard duties as firefighting.

Subsequent to reenlistment, an individual may be selected for attendance at a journeyman level course in his specific occupational area. In most cases, however, enlisted personnel advance in their skill areas through experience gained on the job and without extensive additional formal training. Some enlisted personnel are given the opportunity to attend NCO professional development training programs which prepare them for increased supervisory and leadership responsibilities.

Normally, few enlisted personnel attend regularly programmed specialized courses after mid-career. There are instances, of course, where new equipment or systems are introduced into a Service, and senior level enlisted personnel are formally trained on operation and maintenance techniques. Selected senior enlisted personnel attend schools, such as the Army's Sergeants Major Academy, which are, on the NCO level, similar in purpose to the Intermediate and Senior Service Schools in the officer education system.

III

RECRUIT TRAINING

General Description

Recruit Training is the basic introductory and indoctrination training given to all enlisted personnel of each Service upon their initial entry into military service. Recruit Training provides an orderly transition from civilian to military life, motivation to become a dedicated and productive member of the service, and instruction in the basic skills which are required by all members of the Military Service involved. Training in all Services emphasizes discipline, observance of military rules, social conduct, physical conditioning and the building of self-confidence and pride in being a member of the service. The graduate of Recruit Training has the basic knowledge and skills required to qualify him or her, after formal or on-the-job training in a particular skill, to assume duties in an operational unit.

The term Recruit Training, as used in this report, includes only the basic training described above. It excludes the following types of training which are part of recruit training in Service budgets:

Army:	Advanced Individual Training conducted at Army Training Centers
Navy:	Apprenticeship Training

The training conducted in these programs is oriented toward specific skills needed in the individual's first duty assignment, as opposed to training required by all new enlisted service members. It is, therefore, treated as part of Specialized Skill Training in this report.

Recruit Training Load

The training loads for FY 1974 through FY 1978 for each component of each Military Service are shown below:

Total Training Loads, Recruit Training, FY 1974-78[a]

Service Component	FY 74	FY 75	FY 76	FY 7T	FY 77	FY 78
Army						
Active	26,088	27,325	23,570	25,650	25,490	22,650
Reserve	751	2,205	2,490	1,860	2,810	2,980
Natl Guard	3,272	4,042	4,034	4,514	4,164	4,059
Navy						
Active	16,252	19,283	19,170	21,688	20,328	19,553
Reserve	386	473	337	424	361	367
USMC						
Active	12,409	14,998	13,549	13,608	13,226	12,928
Reserve	905	1,197	1,763	2,088	1,866	1,866
Air Force						
Active	9,797	9,706	9,825	10,908	9,825	9,825
Reserve	162	307	364	388	362	362
Natl Guard	228	387	644	712	686	686
DoD						
Active	64,546	71,312	66,114	71,854	68,869	64,956
Res/Gd Tot	5,704	8,611	9,632	9,986	10,249	10,320
DoD Total	70,250	79,923	75,746	81,840	79,118	75,276

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[a] In this table, and all subsequent tables in this report stating yearly training loads for the time span FY 1974 to 1978, FY 1974 data are actual, FY 1975-78 data are estimated.

Recruit Training for Enlisted Men

The following table displays for male Recruit Training the number of entrants (input), number of graduates (output), and average training loads for each component of each Service for FY 1976-77:

Training Inputs, Output, Loads, Recruit Training (Male), FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	160,900	155,400	21,210	49,200	32,700	22,870	22,950
Reserve	13,700	12,200	1,720	1,685	4,040	1,080	2,160
Natl Guard	28,500	26,700	3,750	8,065	6,600	4,240	3,880
Navy							
Active	95,751	86,260	18,208	31,269	20,777	20,926	19,544
Reserve	2,007	1,791	307	650	598	394	331
USMC							
Active	49,000	46,238	13,297	13,250	9,956	13,332	12,974
Reserve	6,912	5,346	1,746	2,042	1,476	2,076	1,849
Air Force							
Active	66,000	61,110	8,647	21,466	19,867	9,044	8,548
Reserve	1,715	1,469	190	587	515	260	176
Natl Guard	3,912	3,562	470	1,185	1,082	536	512
DoD							
Active	371,651	349,008	61,362	115,185	83,300	66,172	64,016
Res/Gd Tot	56,746	51,068	8,183	14,214	14,311	8,586	8,908
DoD Total	428,397	400,076	69,545	129,399	97,611	74,758	72,924

Recruit Training for Enlisted Women

Each of the Services conducts training for women recruits which is similar in concept to Recruit Training for males. In both the Navy and Air Force, Recruit Training for men and women is collocated and follows much the same syllabus. The major difference between the male and female courses is that women recruits do not receive training in weapons use or other combat-oriented skills, except weapons familiarization training in the Army course. In place of the combat subjects women may receive instruction in subjects which facilitate their transition into military life in a particular Service; in the case of the Marine Corps, the length of training for women is made somewhat shorter.

Training data for women recruits are included in the data for Recruit Training as a whole in the subsequent sections of this chapter. The following table displays relevant FY 1976 to 1977 load data for women's Recruit Training separately.

Training Inputs, Output, Loads, Recruit Training (Female), FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	17,000	16,200	2,360	5,400	4,100	2,780	2,540
Reserve	9,940	9,560	770	2,915	2,925	780	650
Natl Guard	2,500	2,390	284	600	575	274	284
Navy							
Active	5,150	4,467	962	1,147	774	762	784
Reserve	200	173	30	50	25	30	30
USMC							
Active	1,320	1,188	252	360	324	276	252
Reserve	88	79	17	16	14	12	17
Air Force							
Active	9,000	8,640	1,178	3,207	3,079	1,864	1,277
Reserve	1,500	1,425	174	275	261	128	186
Natl Guard	1,500	1,425	174	375	356	176	174
DoD							
Active	32,470	30,495	4,752	10,114	8,277	5,682	4,853
Res/Gd Tot	15,728	15,052	1,449	4,231	4,156	1,400	1,341
DoD Total	48,198	45,547	6,201	14,345	12,433	7,082	6,194

Rationale for Recruit Training

The underlying philosophy of Recruit Training in all of the Services is that the demands of military service are fundamentally different from those of civilian life. Military service requires a high level of discipline and physical fitness, a homogeneity of outlook, and an ability to live and work as part of a highly structured organization. There are few parallels in civilian society to the demands of military service. Each recruit, therefore, must be transformed into a member of the military team in order to function effectively in the military environment. The attitudes, habits, and basic skills formed in Recruit Training are the foundation of a cohesive military organization. Later training provides the skills and knowledge needed for specific jobs; Recruit Training shapes the civilian entrant into a dedicated member of his or her Military Service with the potential for further development.

The major determinants of Recruit Training loads are the total number of people entering service who must receive Recruit Training (input), the length of the training course, and projected patterns of attrition. Course length and attrition are discussed later in this chapter. The following two sections discuss inputs: first, inputs of active duty personnel, and second, inputs of members of the reserve components on active duty for initial training.

Active Duty Input

The annual recruiting objective for active duty enlistees without prior military service is a function of the following factors:

1. The projected requirement for trained enlisted personnel.
2. Current enlisted trained strengths.
3. Number of enlisted personnel currently in training.
4. Projected enlisted losses through separations or other reasons (e.g., desertion, death, acceptance of a commission, etc.).
5. Projected prior-service enlistments -- that is, the return from civilian life of former service members.

"Trained strength" is the number of personnel required to fill "structure" spaces (i.e., positions in military organizations which require specific grades and skills) and individual "pipeline" spaces, such as transients en route between assignments. The Defense Manpower Requirements Report contains a full discussion of how military manpower requirements are determined. The projected trained strength requirement is compared with the projected trained strength inventory to forecast future skill and strength imbalances. Future shortages which are not expected to be satisfied either by prior-service enlistees or service members currently in skill training courses determine the training output needed to man the force with trained personnel. To determine the necessary input to achieve this output, allowance must be made for course attrition, the number of students entering a course of instruction who fail to complete it. The total input requirement must, therefore, be increased to compensate for expected attrition losses.

The FY 1976 requirement for non-prior service enlistees is as follows:

FY 1976 Non-Prior Service Enlistment Requirements
(Active Forces)

	Army	Navy	USMC	USAF
1. Trained Strength, End FY 75	604,900	444,303	164,007	472,244
2. Trainee Strength, End FY 75	74,700	21,306	13,797	30,372
3. Beginning Strength, FY 76 (line 1 + 2)	679,600	465,609	177,804	502,616
4. Projected FY 76 Losses [a]	217,300	149,232	62,246	164,611
5. Prior-Service Gains, FY 76 [b]	79,200	52,846	17,116	77,714
6. Resultant FY 76 End Strength (line 3 - 4 + 5)	541,500	369,223	132,674	415,719
7. FY 76 End Strength Requirement	683,800	459,471	177,731	485,616
8. Trained Input Required During FY 76 (line 7 - 6)	142,300	90,248	45,057	69,897
9. Projected Training Attrition [c]	27,100	10,653	5,263	5,103
10. FY 76 Non-Prior Service Enlistment Requirements (line 8 + 9)	169,400 [d]	100,901	50,320	75,000

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[a] All discharges and releases except those from Recruit Training.

[b] Reenlistments and all other gains not requiring Recruit Training.

[c] Includes all losses to the force prior to time member becomes part of "trained strength".

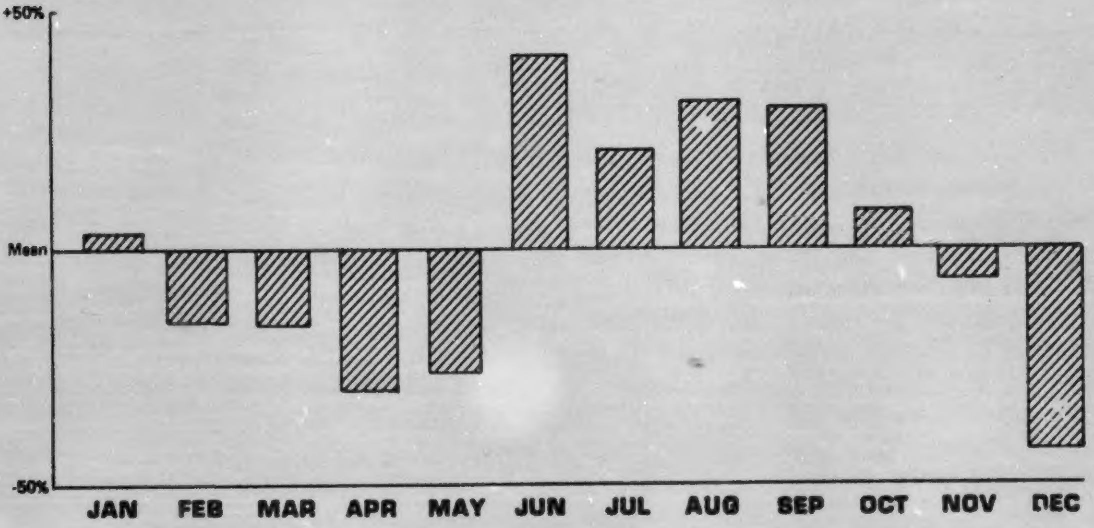
[d] Total Army input to Recruit Training is 177,900. The additional 8,500 input is made up of 7,500 prior-service recruits who receive an abbreviated refresher course and 1,000 personnel who enlisted at the end of the previous fiscal year and begin training at the beginning of FY 1976.

The optimal leveling of monthly inputs to obtain the most efficient use of training staff personnel and training facilities is a continuing goal. However, the phasing of inputs must at times be varied in order to take advantage of the best recruiting periods for maintaining quality and quantity.

Historically, June through September and January have been the most productive recruiting months, reflecting behavioral patterns which are governed largely by events associated with the academic calendar. Enlistments increase (1) shortly after high school graduation, (2) when peers return to school in the fall, and (3) after the results of the first term academic work are announced.

The graph that follows illustrates the seasonal variations in enlistments during calendar year 1974, which is typical of past experience except that January enlistments were somewhat lower, and October somewhat higher, than has been the case in most years.

SEASONAL VARIATION IN ENLISTMENTS, CALENDAR YEAR 1974
(Percent Above or Below Monthly Average)



The Services must accept most prospective enlistees at the time they are ready to enter service. Requiring enlistees to enter military service in phase with requirements and on an even-flow basis would result in the loss of many potential enlistees to other sources of employment. Accepting enlistees as they become available, however, requires a training structure capable of accommodating peak surges of enlistments. The seasonality of enlistments causes active-force Recruit Training loads to be somewhat higher in FY 197T (July-September 1976) than in FY 1976 or 1977, when loads are averages for an entire year rather than one high-enlistment quarter.

Reserve Component Input

Persons entering the National Guard and Reserve forces without active duty experience require the same Recruit Training as active duty enlistees, and for the same reasons. Recruit Training loads for the reserve components are based on the same factors as active force loads. While in Recruit Training, Guard and Reserve trainees are identical to trainees of the active force.

Reserve component recruits form a significant part of the workload of the active Recruit Training establishment. In FY 1976, 13 percent of DoD Recruit Training loads, and 22 percent of Army's, are attributable to Guard and Reserve trainees.

Course Length and Course Content

Enlisted training loads depend not only upon the numbers of entrants but also on the extent of skills required of the enlisted personnel by each Service. Enlisted personnel attain those skills in Recruit Training and in Specialized Skill Training, which is discussed in the following chapter. Thus, Recruit Training course lengths are determined by how much of the required training is to be provided during the Recruit Training phase and how much is to be deferred to later training. The four Services, because of differences in their missions, take somewhat different approaches in establishing the content and length of their Recruit Training courses.

Recruit Training in each of the Services covers four areas: (1) some processing and testing; (2) indoctrination into Service life; (3) instruction in military courtesy, discipline, and hygiene; and (4) fundamental military-related training involving physical fitness, military drill, and self-defense. In addition, each Service provides training in military skills which should be possessed by all, or almost all, members of that Service. The degree to which these Service-wide required skills exist differs widely among the Services. This factor accounts for most of the differences in course content and, therefore, course length.

The length of the standard Recruit Training courses in each Service is shown in the following table:

Recruit Training Course Length FY 1976-77 (Weeks)

Army	Navy	Marine Corps	Air Force
7	9	11	6

The Air Force accomplishes all Recruit Training in six weeks. Course content concentrates on indoctrination subjects. Relatively little training in Service-wide skills is provided since there are few basic skills needed by all Air Force recruits.

The Navy Recruit Training course is nine weeks in length. In addition to subjects oriented toward indoctrinating recruits to military life, the course includes phases designed to prepare them for conditions in a fleet environment and common shipboard tasks.

Army and Marine Corps Recruit Training differ from the Air Force and Navy programs because all recruits are given intensive physical conditioning and instruction in basic ground combat skills, including the use of individual weapons. These Services subscribe to the view that all male enlisted personnel must achieve a basic level of qualification in ground combat skills, and their Recruit Training curricula both provide a common core of training in these skills. Almost all Army enlisted men selected for combat arms assignments, and many male Marines, receive additional training in a specific combat specialty after the completion of Recruit Training. This additional training is shorter in some Marine combat specialities than in the Army. For example, the course for Marine infantrymen, is five weeks long, compared to eight weeks for their Army counterparts, with the result that total training time for new infantrymen in each Service is about the same.

During FY 1975 the Army initiated a two-week refresher program for prior-service personnel (about 40 percent of prior-service entrants) who require some retraining. The few participants, two to five percent of the total, who do not satisfactorily complete the program are recycled into the third week of the standard course. The Army also conducts a two-week Recruit Training program for National Guard or Reserve women enlistees who have civilian-acquired skills which satisfy specific job requirements in their component. About 53 percent of Guard and Reserve women enlistees participate in this abbreviated course; the remainder undergo the standard Recruit Training course.

The average length of time spent in recruit status may be longer than the standard course lengths discussed above. Some recruits fall behind their peers because of illness. Others require remedial training. If this cannot be accomplished by additional instruction, the recruit may be sent to a special training unit or recycled to a following class to repeat a portion of the course.

Two opposing pressures on Recruit Training serve to regulate its length. New recruits must be paid as soon as they enter service but are not productive until they have completed training and are assigned to a unit. This exerts an economic pressure on each Service to minimize training time before the trainees enter the structure. Countering this influence are the problems which could be caused by inadequate Recruit Training. Such recruits could be a drain on their unit in three ways:

1. Through inexperience with and lack of motivation for military life and regulations, they could cause disciplinary problems.

2. They would be less able to accomplish their assigned jobs; in some assignments, they could be a safety hazard to themselves or others.

3. They would require training from more experienced unit members, thus degrading the total productivity of the people assigned to the unit and impairing unit readiness.

Attrition in Recruit Training

A final factor in the computation of loads is the projection of the rate and timing of attrition. Recruits may fail to complete training for medical reasons, inability to absorb the instruction, lack of motivation, disciplinary problems, or a variety of administrative causes, such as discharge for fraudulent enlistment or family hardship. The following table shows projected attrition losses for FY 1976. Recruit Training input figures are shown for comparison.

Recruit Training Input and Attrition Projections, FY 1976[a]
(Active and Reserve Combined)

	Army	Navy	Marine Corps	Air Force
Input	232,540	103,108	57,320	83,627
Attrition	23,390	12,170	5,977	5,996

[a] Figures include both active force and Reserve Component members.

The timing of attrition varies from case to case. In the case of slow learners or individuals who have difficulty in adjusting to military life, trainees usually are recycled or given special instruction; those who do not respond adequately may not become attrition losses until late in the course.

IV

OFFICER ACQUISITION TRAINING

General Description

Officer Acquisition Training consists of training programs leading to a commission in one of the Military Services. The purpose of these programs is to fulfill the need for qualified junior officers as entrants into the career force and to meet requirements for non-career junior officer structure. Officer Acquisition Training programs produce officers for both the active forces and the reserve components.

For purposes of this report, Officer Candidate School programs (carried in budgets in specialized training) and Other Enlisted Commissioning Programs and Health Professionals Acquisition Programs (carried in budgets in professional training) are included within the category of Officer Acquisition Training.

Training loads for Officer Acquisition Training during the period FY 1974-78 are shown in the following table.

Total Training Loads, Officer Acquisition Training, FY 1974-78

Service Component	FY 74	FY 75	FY 76	FY 7T	FY 77	FY 78
Army						
Active	5,356	5,260	4,838	4,852	4,686	4,534
Reserve	130	137	131	101	131	131
Natl Guard	-	2	2	2	2	2
Navy						
Active	6,910	6,731	6,488	6,492	6,583	6,734
Reserve	108	126	126	84	84	60
USMC						
Active	414	474	485	512	501	501
Reserve	285	333	347	936	366	366
Air Force						
Active	5,784	5,873	5,667	6,320	5,686	5,641
Reserve	20	11	12	16	12	12
Natl Guard	-	3	1	-	1	1
DoD						
Active	18,464	18,338	17,478	18,176	17,456	17,410
Res/Gd Tot	543	612	619	1,139	596	572
DoD Total	19,007	18,950	18,097	19,315	18,052	17,982

ROTC and Health Scholarship Programs

The total loads above do not include two types of Officer Acquisition Training: the Army, Navy, and Air Force Reserve Officers Training Corps (ROTC) programs and the Armed Forces Health Professions Scholarship program, participated in by the Army, Navy and Air Force. Members of these programs are not in active military status, whereas students who make up the training loads discussed in this report are either members of the active forces or members of the reserve components being trained on active duty by the active establishments. The ROTC and Health Scholarship programs are therefore not included in the requested training loads, although they are discussed in this chapter to provide a complete account of Officer Acquisition Training. The following tables show the number of participants in these two programs in the period FY 1974 through 1978.

Average Enrollees, ROTC Programs, FY 1974-77

Service	FY 1974	FY 1975	FY 1976	FY 1977
Army	28,646	37,237	41,221	45,250
Navy	7,221	8,100	8,100	8,100
Air Force	18,848	18,807	18,209	18,209
DoD Total	54,715	64,144	67,530	71,559

Health Professions Scholarships, FY 1974-77

Army	1,850	1,850	1,850	1,850
Navy	1,575	1,575	1,575	1,575
Air Force	1,575	1,575	1,575	1,575
DoD Total	5,000	5,000	5,000	5,000

The figures shown above for Health Professions Scholarships are on a "scholarships authorized" basis. The figures for each Service are those currently authorized by DoD to each Service from the total of 5,000 authorized scholarships.

Junior ROTC is a program designed to develop leadership qualities, good citizenship, and an understanding of the basic elements of national security among high school students. Despite its name, it is not an officer acquisition program, since it does not result in a commission. Junior ROTC is not included within training loads covered by this report.

Officer Requirements and Structuring the Officer Acquisition Program

Requirements for new officers, like requirements for new enlisted personnel, are a product of the need for officers in the projected force as compared to the projected future inventory of officers. A properly functioning program, in addition to filling the gross requirement for officer entrants for any given year, also provides an even flow of new officers of a sufficient magnitude to avoid the emergence of unmanageable shortages and overages by age and grade in the downstream officer structure. Each of the Services uses a mix of sources for new officers.

The mix of officer acquisition programs used must recognize the characteristics of each source, such as stable input, long lead-time; flexible inputs, short lead-time; high academic quality with comprehensive military indoctrination; and high level of technical skill. Additionally, consideration must be given to each program's ability to attract applicants, the quality of the graduates, and their probable retention and attrition. These differences and others must be recognized and exploited in planning officer procurement.

As an illustration of program characteristics, the Service Academies present a long lead-time program which produces a significant proportion of highly trained career military officers -- about 44 percent of Regular Army officers commissioned in FY 1976, for example. While ROTC is also a long lead-time program, it provides the largest single input of officers to the active duty force, although many of these officers will leave active duty and join the reserve components. In this manner, ROTC provides officers to support the total force, both active and reserve. Officer Candidate Schools provide the short lead-time commissioning source necessary to respond to immediate surges in officer requirements, since the program can be expanded or reduced in a relatively short period of time. The off-campus commissioning programs, such as the Navy's Reserve Officer Candidate (ROC) program, are long lead-time programs, but provide the student at virtually any four-year college or university the opportunity to earn a commission through summer training but without military responsibilities during the school year. Finally, Other Enlisted Commissioning Programs are long-lead-time in nature, but provide a source of officers who possess specific technical skills and who have a proven high rate of retention. In addition to these reasons for using a variety of sources to satisfy officer requirements, it is also desirable to use different sources to keep the officer corps from being restricted to a narrow segment of the national population and to provide opportunities for highly qualified enlisted personnel.

Officer Acquisition Training programs may be divided into six separate categories: Service Academies; Reserve Officers Training Corps (ROTC); Officer Candidate Schools (OCS); Off-Campus Commissioning Programs (the Platoon Leaders Class, sponsored by the Marine Corps, and the Navy's Reserve Officer Candidate and Aviation Reserve Officer Candidate programs); Enlisted Commissioning Programs (Navy Enlisted Scientific Education Program and the Air Force's Airman Education and Commissioning Program); and the Health Professionals Acquisition Programs.

Service Academies

The mission of the Service Academies (United States Military Academy, United States Naval Academy and United States Air Force Academy) is to meet a portion of the long-range need for career military officers. They provide instruction and experience to each cadet or midshipman so that he graduates with the knowledge and character essential to leadership and with the motivation to become a career officer. Cadets and midshipmen participate in a four-year program of academic studies and training in leadership and other military subjects. Successful completion of the specified academic and military requirements entitles the graduate to a Bachelor of Science degree and a Regular commission in one of the Military Services.

The Service Academies are distinctive among the collegiate institutions of the nation in that their curricula are specifically designed to prepare young men for service as professional officers. The total curriculum at each Academy is designed to develop the qualities of character, intellect, and physical competence needed by the officer who may, in the course of a full career, be called upon to perform duties ranging from leading a small combat unit to advising the highest government councils. The programs include the sciences, the humanities, and military and physical training, and form the basis for further professional development or, when required, graduate education.

The maximum enrollments of the Service Academies are established by law. This fact establishes stable training loads for the Academies. Training load data for the Service Academies for FY 76 through 77 are shown in the following table:

Training Inputs, Output, Loads, Service Academies, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input a/	Output	Load	Load
Army	1,425	875	4,130	1,400	-	4,370	4,225
Navy	1,388	815	4,150	285	[illegible]	4,180	4,200
Air Force	1,647	935	4,138	85	-	4,552	3,972
DoD Total	4,460	2,625	12,418	1,770	-	13,102	12,397

a/ The varying input figures for FY 197T are the result of different reporting times (before or after July 1, 1976) for members of the entering class.

Each of the Military Departments sponsors an Academy preparatory school. Marine Corps personnel attend the Navy school. The missions of these schools are to provide intensive instruction and guidance, in courses of instruction approximating one academic year, to selected enlisted personnel in preparation for entry to the Service Academies. Students compete for appointments by the Secretaries of the Military Departments and from other sources. The Naval Academy Preparatory School also provides instruction to candidates for the Navy Enlisted Scientific Education Program.

Training Inputs, Output, Loads, Academy Preparatory Schools, FY 76, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	170	100	127	170	-	115	127
Reserve	150	130	129	150	-	100	129
Navy							
Active	511	381	208	300	100	162	215
USMC							
Active	50	30	30	50	-	76	30
Air Force							
Active	260	150	140	250	-	252	140
DoD							
Active	991	661	505	770	100	605	512
Gd/Res Total	150	130	129	150	-	100	129
DoD Total	1,141	791	634	920	100	705	641

ROTC Programs

ROTC is a long lead-time program which is the single largest source of officers for the Armed Forces. Like the Service Academies, ROTC is used to provide a relatively constant input of officers for active duty, but ROTC also provides non-career officers as well as career officers. The program is currently conducted at 379 civilian colleges and universities throughout the nation. The Army, Navy, and Air Force each sponsor an ROTC program; the Marine Corps commissions a small number of Navy ROTC graduates. Scholarships and subsistence allowances authorized by law, in addition to conventional recruiting and advertising methods, are used to attract qualified students. Scholarships are awarded to students who exhibit potential ability and interest in fields of projected Service needs.

There are both scholarship and non-scholarship, as well as two-year and four-year, ROTC programs. The curriculum of each program is tailored to the needs of the individual Services. For example, the Navy teaches the basics of ship navigation, while the Army teaches the fundamentals of ground combat and the Air Force provides some basic instruction in aerospace history and doctrine. All programs include instruction in leadership, military customs and military history, and each program provides prospective officers with a gradual transition from the civilian environment to the military environment. Each ROTC program consists of a series of regularly scheduled academic classes throughout the school year combined with mandatory summer camps or cruises which are designed to give the student realistic military experience and a first-hand view of military life.

As was noted at the beginning of this chapter, the ROTC program is not included in Service training loads because the students are not in an active military status. The following table provides the numbers of entrants, graduates, and total participants in the three Service programs during FY 1976.

ROTC Programs in FY 1976

Service	Entrants	Graduates	Average Enrollments
Army	20,484	5,095	41,221
Navy	2,815	1,480	8,100
Air Force	8,695	3,575	18,209
DoD Total	31,994	10,150	67,530

Off-Campus Commissioning Programs

The Officer Acquisition Training programs in which college students participate but which are conducted off the college campus are the Navy's Reserve Officer Candidate (ROC) and Aviation Reserve Officer Candidate (AVROC) programs, and the Marine Corps Platoon Leaders Class (PLC). These programs provide for enlistments as a Naval or Marine Corps Reservist while the student is still an undergraduate and require participation in summer military training.

Students participating in these programs attend either one or two summer training sessions, depending upon when, during their college career, they were enrolled. The objectives of the programs are to indoctrinate, motivate, and train the enrollees by providing instruction in basic military subjects, leadership, and physical training. In addition, students enrolled in the Aviation Reserve Officer Candidate program receive flight indoctrination and training. ROC and AVROC students attend Navy Officer Candidate courses prior to receiving their commissions. PLC students are commissioned when their college degrees are conferred; the newly commissioned officers then attend the Marine Corps Officer Basic Course.

In conformance with the nature of these programs, the training loads in the following table are based only on the time spent in summer training. Loads, consequently, are low as compared to inputs and outputs.

Training Inputs, Output, Loads, Off-Campus Commissioning Programs
FY 1976, 7T, 77

Component	FY 76			FY 7T			FY 77
Program	Input	Output	Load	Input	Output	Load	Load
Naval Reserve							
ROC	260	153	66	-	-	24	24
AVROC	450	340	60	300	225	60	60
USMC Reserve							
PLC	3,175	2,614	345	1,022	2,611	932	364
DoD Total	3,885	3,107	471	1,322	2,836	1,016	448

Officer Candidate Schools (OCS)

Each of the Military Services operates an Officer Candidate School. The Air Force school is entitled Officer Training School.

Enlisted members can use this route to "rise from the ranks". The existence of OCS programs, and the other enlisted commissioning programs covered in the next section, is therefore a significant advancement incentive to ambitious and promising enlisted personnel.

The Navy, Marine Corps and Air Force offer direct entry into OCS to selected college graduates without previous enlisted service. Some college students in highly specialized academic disciplines, such as engineering and physical sciences, feel that they cannot afford the time required to participate in ROTC. This commissioning method places no demands on the potential officer while he pursues his civilian education and affords a commissioning opportunity after college graduation. In addition to its commissioning courses, the Marine Corps also has a course for warrant officer candidates.

All Services provide OCS training to female as well as male candidates. The Navy and Air Force courses for men and women are fully integrated. The Army OCS for women is separate, but the graduates proceed after graduation to the various branch Basic Officer Courses with their male peers. The following table shows the lengths of the various courses.

Course Lengths, Officer Candidate Schools

Service Course	Course Length (Weeks)
Army	
OCS (Male students)	14
WAC Officer Orientation Course	11
Navy	
OCS (Male and Female students)	19
Aviation OCS	16
Marine Corps	
OCS (Male students)	12
Women's OCS	8
Warrant Officer Candidate Schools	6 1/2
Air Force	
OTS (Male and Female students)	12

Load data for OCS programs in FY 1976-77 are shown in the following table.

Training Inputs, Output, Loads, Officer Candidate Schools, FY 76, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	1,298	968	282	360	307	282	282
Reserve	8	8	2	2	2	1	2
Natl Guard	9	9	2	3	3	2	2
Navy							
Active	1,315	1,078	321	377	351	341	355
USMC							
Active	1,398	957	235	433	332	324	241
Reserve	10	9	2	3	2	4	2
Air Force							
Active	1,439	1,266	318	656	577	580	503
Reserve	52	46	12	19	17	16	12
Natl Guard	5	4	1	1	1	-	1
DoD							
Active	5,450	4,269	1,156	1,826	1,567	1,527	1,381
Gd/Res Total	84	76	19	28	25	23	19
DoD Total	5,534	4,345	1,175	1,854	1,592	1,550	1,400

Other Enlisted Commissioning Programs

The Air Force, Navy, and Marine Corps each have enlisted commissioning programs in addition to Officer Candidate Schools. The purposes of these programs are: (1) to provide a source of officers in specific skills with an expected high rate of retention; (2) to provide an avenue whereby enlisted personnel with proven qualifications can augment the commissioned ranks, and (3) to provide a measure of motivation to enlisted personnel. The Naval Enlisted Scientific Education Program provides, for enlisted Naval and Marine Corps personnel, up to four years of college education leading to a baccalaureate degree in one of the major areas of engineering or mathematics and a commission in the Regular Navy or Marine Corps. A similar program, the Marine Enlisted Commissioning Education Program, offers a degree program in the liberal arts. Students in the USAF Airman Education and Commissioning Program major in engineering, science, mathematics, or management, with matriculation up to three years; the average academic time spent in the program is about 21 months. In all these enlisted commissioning programs, participants attend Officer Candidate School before they are commissioned.

The following table displays load data for these programs in FY 1976-77. All participants are members of the active forces.

Training Inputs, Output, Loads, Other Enlisted Commissioning Programs
FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
	Input	Output	Load	Input	Output	Load	Load
Navy	300	270	1,044	315	50	1,044	1,048
Marine Corps	115	93	220	83	50	112	230
Air Force	400	311	640	95	95	640	640
DoD Total	815	674	1,904	493	195	1,796	1,918

Health Professionals Acquisition Programs

This subcategory may be conveniently divided into two parts, the Armed Forces Health Professionals Scholarship Programs and "other health professionals acquisition programs." The Health Professionals Scholarship program was established in 1972 by Public Law 92-426. Participants are selected from among students, or those accepted for enrollment, in recognized health professions schools.

Participants are commissioned in grade O-1 in the Reserve of their parent Service, but, except for a short period of annual active duty, are not in active status. They are, therefore, not included within the training loads of their Services. Upon graduation, participants must serve obligated tours of duty, the length of which depends on the length of their participation in the program.

The program is authorized a total of 5,000 scholarships at its current level. Service data for FY 1976 is shown in the following table:

Service	Scholarships	FY 1976 Graduates
Army	1,850	556
Navy	1,575	464
Air Force	1,575	397
DoD Total	5,000	1,417

"Other health professionals acquisition programs" include a variety of programs with the purpose of recruiting required health professionals into the Services through tuition assistance or other aid. Among the included programs are programs for medical, dentistry, nursing, and other students in the health professions. Some programs offer assistance for full courses of professional training, whereas others are offered only to students in their final year of study. Some included programs support health professions training for active duty Service members, intended to produce high-retention health professionals. Participants in all programs incur an active duty obligation commensurate with the educational support received.

Load data for FY 1976-77 are shown in the following table.

Training Inputs, Output, Loads, Other Health Professionals Acquisition Programs, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
	Input	Output	Load	Input	Output	Load	Load
Army	10	377	299	-	-	85	52
Navy	351	327	765	278	12	765	765
Air Force	114	178	431	23	13	296	431
DoD Total	475	882	1,495	301	25	1,146	1,248

An additional source for commissioned health professionals, the Uniformed Services University of the Health Sciences, plans to begin its first classes in December, 1975.

V

SPECIALIZED SKILL TRAINING

General Description

Specialized Skill Training provides officer and enlisted personnel with skills and knowledge needed to perform specific jobs. Each Service has established a job structure that makes it possible for it to carry out its assigned missions. Each position in each organization within that job structure has been analyzed to determine the skills necessary to insure that each job is done properly and efficiently. The purpose of Specialized Skill Training is to impart these required skills to the proper number of individuals in a phased manner so that each position vacancy in the structure can be filled promptly with a qualified replacement.

Specialized Skill Training, as used in this report, differs from "specialized training" as used in Service budget justifications in the following respects:

Inclusions: Specialized Skill Training includes Army Advanced Individual Training and Navy Apprenticeship Training. Some of the former and all of the latter are carried as part of Recruit Training in budget justifications. Specialized Skill Training also includes some aviation-related ground training carried in the budgets of some Services under Flight Training.

Exclusions: All Officer Acquisition Training programs, notably Officer Candidate School.

Specialized Skill Training loads for FY 1974-78 are as shown in the following table:

Total Specialized Skill Training Loads, FY 1974-78

Service Component	FY 74	FY 75	FY 76	FY 7T	FY 77	FY 78
Army						
Active	46,039	51,921	49,364	39,945	50,891	47,913
Reserve	1,701	3,386	4,600	3,424	4,421	4,421
Natl Guard	4,294	6,015	5,644	4,870	5,897	5,897
Navy						
Active	37,199	37,925	38,633	37,949	39,842	39,612
Reserve	1,155	1,516	1,165	1,561	1,631	1,631
USMC						
Active	11,490	10,273	10,702	11,272	10,754	10,754
Reserve	415	604	641	1,008	685	685
Air Force						
Active	30,070	28,078	28,200	27,132	27,859	27,862
Reserve	319	272	347	328	311	311
Natl Guard	657	857	1,168	1,340	1,260	1,260
DoD						
Active	124,798	128,197	126,899	116,298	129,346	126,141
Gd/Res Tot	8,541	12,650	13,565	12,531	14,205	14,205
DoD Total	133,339	140,847	140,464	128,829	143,551	140,346

As in the other types of training covered in this report, the demand placed on the training establishment for individuals with certain skills is determined by comparing projected requirements for each skill and skill level with the projected future inventory of trained service members.

When anticipated losses are deducted from the current inventory, shortages in various skill areas are revealed. These shortages, except for those which can be satisfied through on-the-job training, or, in a few cases, through lateral entry from civilian life of individuals who already possess an employable skill, create a demand for a phased output of trained replacement personnel. Estimates are made of the portion of students in each training course who will fail to complete the course. These course attrition factors determine the inputs necessary to achieve the desired course outputs. Inputs, outputs, attrition patterns, and course lengths determine the training loads. These factors are discussed for each sub-category of Specialized Skill Training in the remainder of this chapter.

Specialized Skill Training is the most diverse of the five major categories of individual training. In the interest of clarity, the full category has been divided into five sub-categories. Two are concerned with initial skill training, one for officers, the other for enlisted personnel; two others cover more advanced training, again divided by officer and enlisted. The last category covers both officer and enlisted training which, for the most part, imparts required knowledge or skills without changing the student's primary skill or skill level.

Initial Skill Training (Enlisted)

Initial Skill Training includes all formal training normally given immediately after Recruit Training and leading toward the award of a military occupational specialty or rating at the lowest skill level. Successful completion of the training qualifies the enlisted member to take a position in the job structure of the Service and to progress, through job experience, to the journeyman level.

The great majority of Service recruits are drawn from the least skilled segment of the population. Most recruits are under age 21 and have little civilian job experience, either because they are just entering the job market or because of prevailing unemployment in their age group. In addition, some civilian specialties are not in demand in the military job structure, and many of the most important military skills have no civilian counterpart. Consequently, with the exception of a small number of people who enter the Service with a skill and can be used with little or no additional training, enlistees must be trained in a skill before they can become productive. Some skills can be acquired through experience, or on-the-job training. Most, however, are most effectively and efficiently learned through the formal courses of Initial Skill Training.

Load data for Initial Skill Training (Enlisted) in FY 1976 through 1977 are displayed in the following table. The classification of this training is determined by its purpose, rather than by whether entrants attend immediately after Recruit Training. Thus some prior-service students and retrainees from other skill areas may be reflected in these data.

Training Inputs, Output, Loads, Initial Skill Training (Enlisted)
FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	179,512	163,356	31,174	34,318	27,454	22,891	32,443
Reserve	19,519	17,762	3,210	3,551	2,841	2,304	3,052
Natl Guard	26,197	23,839	4,346	5,682	4,546	3,587	4,520
Navy							
Active	195,766	179,527	21,593	44,965	40,790	20,799	22,901
Reserve	4,604	4,064	618	1,890	1,653	1,011	1,098
USMC							
Active	36,319	32,777	7,370	9,414	7,890	7,360	7,326
Reserve	3,708	3,373	517	1,362	1,239	680	561
Air Force							
Active	71,346	67,087	20,494	22,157	20,845	19,784	20,500
Reserve	1,603	1,579	286	348	327	248	254
Natl Guard	3,789	3,562	877	1,092	1,026	1,008	972
DoD							
Active	482,943	442,747	80,631	110,854	96,979	70,834	83,170
Gd/Res Tot	59,420	54,179	9,854	13,925	11,632	8,838	10,457
DoD Total	542,363	496,926	90,485	124,779	108,611	79,672	93,627

Reflecting the variety of skills required in the four Services, there is a large number of courses for enlisted personnel in Initial Skill Training, as shown in the following table:

Number of Courses, Initial Skill Training (Enlisted), FY 1976

Army	Navy	Marine Corps	Air Force
341	106	278 [a]	236

[a] Includes courses conducted by the Navy and other Services programmed for attendance by Marines.

Some of these courses are in highly technical skills, such as nuclear reactor specialist or electronics technician. Others involve less complex, but not less important, skills -- infantryman, cook, clerk-typist, mechanic, and vehicle driver. A sampling of the courses in each Service which will produce the most graduates in FY 1976 is shown below:

Courses Producing Most Graduates, FY 1976

Service	Course Title	No. of Graduates	Length (days)
Army	Light Weapons Infantryman	24,069	56
	Field Artillery Basic	10,572	49
	Wheel Vehicle Mechanic	9,645	56
	Pioneer (Combat Engineer)	7,475	49
	Food Service Specialist	6,457	56
Navy	Apprentice Training[a]	26,900	16
	Aviation Fundamentals	15,057	9
	Basic Electricity and Electronics	11,767	31
	Engineering Propulsion Basic	7,737	23
Marine Corps	Infantry Training School	10,482	34
	Basic Administrative Clerk	2,685	24
	Field Radio Operator	1,819	54
	Basic Automotive Mechanic	1,350	84
Air Force	Security Specialist	4,673	36
	Jet Aircraft Maintenance	3,219	80
	Law Enforcement Specialist	2,639	36
	Inventory Management	2,448	51

[a] Apprentice Training is composed of fundamental training in one of four basic skill areas: Seaman, Fireman, Airman, Constructionman. The course length shown is the average for those four skills.

Course lengths vary widely according to the complexity of the subject matter. For example, the Air Force course for electronic computer systems repairman is 280 days in length, wheras the course for security specialist takes only 36 days. Army nuclear power plant operators receive an entire year of training, but motor transport operators and ground surveillance radar crewmen complete their training in 35 days. Average course lengths are displayed in the following table. The Navy average is low in comparison to the others because it includes a large number of students in short courses related to particular shipboard duties and because of the predominance of the relatively short apprentice courses; in addition, Navy personnel, to a greater degree than personnel of the other Services, receive supplementary formal training during their first enlistments.

Average Course Lengths (Days), Initial Skill Training (Enlisted), FY 1976

Army	Navy	Marine Corps	Air Force
62	43	76	100

The final determinant of training loads is the anticipated rate of attrition. Attrition rates must be estimated for each course. The rate may be negligible for a reasonably routine course if the students entered in the course have the necessary mental abilities and motivation. Attrition may run much higher, up to one-third of the class entrants, in complex technical subjects, such as the Army Nuclear Weapons Electronic Specialist course. The average anticipated rates for FY 1976 are as shown:

Average Attrition Rates, Initial Skill Training (Enlisted), FY 1976
(Percent)

Army	Navy	Marine Corps	Air Force
9	8	10	6

Skill Progression Training (Enlisted)

This sub-category covers skill training received by enlisted personnel subsequent to Initial Skill Training. Through this training, the student gains the knowledge to perform at a more skilled level or in a supervisory position. Skill Progression Training is most frequently given after the Service member has gained experience through actual work in his specialty. In some cases, however, training in a relatively narrow subject area as an immediate follow-on to Initial Skill Training is included in Skill Progression Training.

Training load data for Skill Progession Training (Enlisted) for FY 1976 through 1977 are shown in the following table.

Training Inputs, Output, Loads, Skill Progression Training (Enlisted)
FY 1976, 7T, 77

Service	FY 76			FY 7T			FY77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	30,756	28,603	4,834	7,731	5,821	4,034	4,988
Reserve	2,784	2,589	738	738	556	352	684
Natl Guard	2,788	2,593	485	792	596	456	537
Navy							
Active	72,259	68,199	10,734	18,464	17,474	10,876	10,802
Reserve	1,455	1,389	145	351	335	161	140
USMC							
Active	4,500	4,313	981	1,557	946	1,280	981
Reserve	729	728	57	634	628	120	57
Air Force							
Active	67,023	65,959	5,691	16,151	15,461	5,416	5,406
Reserve	755	742	34	251	246	48	33
Natl Guard	3,897	3,396	215	1,167	1,147	260	215
DoD							
Active	174,538	167,074	22,240	43,903	39,702	21,606	22,177
Gd/Res Tot	12,408	11,437	1,674	3,933	3,508	1,397	1,666
DoD Total	186,946	178,511	23,914	47,836	43,210	23,003	23,843

The requirement for Skill Progression Training arises from the fact that training in a skill at entry level and subsequent experience do not, in many cases, fully qualify a Service member to do the more advanced jobs in his field without further formal training. Several factors may contribute, singly or in combination, to a need for additional formal training:

1. The introduction of new equipment.

2. The need to produce a higher degree of skill in a sub-specialty.

3. The need to impart a broader base of knowledge to qualify an individual for a supervisory responsibility.

4. The requirement for refresher training to bring the Service member up to date on the latest information and techniques in his skill.

The primary need, as in all other types of training, is to have trained individuals available to replace losses as they occur. Planning future training in this sub-category follows the same general pattern as for Initial Skill Training. Some additional complications, however, are introduced by the fact that members eligible for schooling are frequently serving overseas or on board ship, rather than flowing from the Recruit Training pipeline. This situation frequently requires that personnel receive the training when they are available, preferably between duty assignments, rather than when they might most easily be accommodated for formal school training.

The following table displays statistics in Skill Progression Training in each of the Services for FY 1976.

Skill Progression Training (Enlisted), FY 1976

	Army	Navy	Marine Corps [a/]	Air Force
Number of Courses	87	1,388	218	1,600
Average Course Lengths (Days)	63	52	74	32
Projected Attrition Rate (Percent)	7	6	4	2

a/ Includes courses conducted by the Navy and other Services programmed for attendance by Marines.

The large number of Navy and Air Force courses is a reflection of the technical nature of these Services and their large number of subspecialties. Of course, some of the difference is attributable to differing Service approaches to course definition and segmenting.

Initial Skill Training (Officer)

As a general rule, Officer Acquisition Training is oriented toward the broad educational background and general military training which is considered necessary for all officers entering a Service. In consequence, most newly commissioned officers require training for the specific types of duty they will be performing in their first duty assignment. Initial Skill Training for officers is, therefore, analogous to Initial Skill Training for enlisted personnel -- both provide the job-oriented training which, added to the military fundamentals learned earlier, prepares the individual for taking a place in the job structure.

Load data for Initial Skill Training (Officer) for FY 1976-77 are displayed in the following table:

Training Inputs, Output, Loads, Initial Skill Training (Officer), FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	9,267	9,174	1,864	3,720	2,939	1,740	1,870
Reserve	933	924	154	410	324	132	158
Natl Guard	1,209	1,197	274	449	355	272	280
Navy							
Active	3,937	3,578	896	1,137	1,039	916	897
Reserve	1,080	1,060	105	263	260	93	99
USMC							
Active	3,744	3,855	1,410	996	1,726	1,524	1,552
Reserve	25	25	8	11	5	16	8
Air Force							
Active	5,577	5,518	1,102	1,368	1,378	1,108	1,102
Reserve	15	15	2	5	5	-	2
Natl Guard	150	148	26	37	36	20	24
DoD							
Active	22,525	22,125	5,272	7,221	7,082	5,288	5,421
Gd/Res Total	3,412	3,369	569	1,175	985	533	571
DoD Total	25,937	25,494	5,841	8,396	8,067	5,821	5,992

With minor exceptions, all newly commissioned Army officers attend an officer basic course at their branch school -- Infantry officers at the Infantry School, Engineer officers at the Engineer School, etc. Most of these courses are 12 weeks in length, and the officer attends before reporting to his first unit of assignment. In addition, certain officers are selected to attend follow-on skill or functional training courses for more specialized assignments.

All submarine and nuclear officers and about 50% of Surface Navy officers go to Initial Skill Training. The Navy provides 17 courses for officers in Initial Skill Training, with an average length of 99 days. Most of the courses are essentially indoctrination courses or courses in specific duties, such as in antisubmarine warfare, which a junior officer may be destined to assume aboard ship.

All newly commissioned Marine Corps officers attend a basic course (28 weeks in length for male officers, 10 weeks for female officers) for general orientation and training. In addition, Marine officers attend 61 Initial Skill Training courses (some conducted by Navy or other Services), average 74 days in length, related to specific officer jobs.

The Air Force conducts 54 Initial Skill Training courses for officers, with an average length of 87 days; about 45 percent of newly commissioned officers attend these courses.

Skill Progression Training (Officer)

Skill Progression Training for officers is, in general, aimed at officers with several years of practical experience and provides them knowledge needed to assume more advanced responsibilities. For example, the Army provides advanced courses which are structured to prepare the students for battalion and brigade duties in addition to command responsibilities at the company and battery level. Data for Skill Progression Training (Officer) are displayed in the following table:

Training Inputs, Output, Loads, Skill Progression Training (Officers), FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	8,755	8,668	3,278	2,728	2,278	3,192	3,373
Reserve	3,069	3,038	254	869	726	256	261
Natl Guard	1,977	1,957	266	564	471	268	275
Navy							
Active	8,441	8,102	1,206	2,351	2,251	1,172	1,090
Reserve	140	134	6	40	37	8	7
USMC							
Active	530	530	165	236	138	200	165
Reserve	68	68	5	67	67	16	5
Air Force							
Active	8,582	8,468	544	2,010	1,984	480	510
Reserve	350	347	12	117	116	16	12
Natl Guard	1,049	1,033	40	261	257	40	40
DoD							
Active	26,308	25,768	5,193	7,325	6,651	5,044	5,138
Gd/Res Tot	6,653	6,577	583	1,918	1,674	604	600
DoD Total	32,961	32,345	5,776	9,243	8,325	5,648	5,738

The Army conducts 16 branch-oriented courses, most of which are 32 weeks in length. The Navy maintains 135 courses, averaging 51 days in length, which cover a variety of specialized duties which are typically performed by officers with several years of service -- for example, destroyer officer course, aviation maintenance officer course, and nuclear propulsion plant course.

Both the Marine Corps and the Air Force conduct broad courses for officers at about the same level as the Army's advanced courses; however, as these are Service-wide and uniform in content, they are carried in Professional Development Education. Within Skill Progression Training, Marine Corps officers attend 85 courses, with an average length of 104 days, on a variety of specialized subjects, some conducted by the Navy or other Services. The Air Force has 550 courses, averaging 23 days in length, for the purpose of training officers in new duties required by their prospective assignments.

Functional Training

Functional Training is an "all other" sub-category covering those types of required training which do not fit neatly into the definitions of the other sub-categories. By and large, Functional Training is in subject areas which cut across the scope of military occupational specialties and provides additional required skills without changing the student's primary speciality or skill level. Both officers and enlisted personnel participate in Functional Training. Load data for FY 1976-77 are shown in the following table.

Training Inputs, Output, Loads, Functional Training, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	70,196	67,190	8,214	17,645	13,232	8,088	8,217
Reserve	4,318	4,196	244	2,080	1,561	380	266
Natl Guard	3,841	3,737	273	1,055	792	287	285
Navy							
Active	346,448	340,208	4,204	87,445	85,445	4,186	4,152
Reserve	14,654	14,306	291	3,990	3,848	288	287
USMC							
Active	7,336	6,169	776	2,124	1,342	908	730
Reserve	1,396	1,396	54	1,271	1,250	176	54
Air Force							
Active	17,026	16,880	369	4,018	3,960	344	341
Reserve	578	560	13	190	189	16	10
Natl Guard	400	396	10	100	100	12	9
DoD							
Active	441,006	430,447	13,563	111,232	103,979	13,526	13,440
Gd/Res	25,187	24,591	885	8,686	7,740	1,159	911
DoD Total	466,193	455,038	14,448	119,918	111,719	14,685	14,351

Army Functional Training includes the airborne, ranger, and special forces qualification courses, some specialized NCO supervision courses, and a number of courses related to specialized equipment (e.g., Manual Cordless Switchboard Repair; 8-inch Atomic Projectile Assembly).

Navy Functional Training differs from that of the other Services because of the very high input to a large number of very short courses (the longest is 12 days, the shortest is one day). Most of the training consists of in-port training for ships' crews, and includes the following types of activity:

1. Shore training for shipboard teams (firefighting, damage control, anti-submarine warfare, etc.).

2. Short basic or refresher courses at fleet training centers in the operation of equipment or systems.

3. Shipboard in-port training assistance.

4. Precommissioning training for newly formed crews of ships under construction.

Marine Corps Functional Training provides skills required for specific jobs but not limited to a primary occupational specialty. Some of the included courses are scuba training, seaduty indoctrination, and drill instruction training.

Almost all Air Force Functional Training is survival training related to various environments: water, arctic, jungle or tropic.

The following table provides additional statistics on Functional Training.

Courses and Course Lengths, Functional Training, FY 1976

	Army	Navy	Marine Corps a/	Air Force
Number of courses	159	1,566	191	8
Average Course Length (Days)	56	4	37	7

a/ Includes courses conducted by the Navy and other Services programmed for attendance by Marines.

VI

FLIGHT TRAINING

General

Flight Training programs provide basic flying skills required prior to operational assignment of pilots, navigators, and naval flight officers. Most of the training in this category is undergraduate flight training; at the conclusion of this training, a graduate is awarded "wings" and is classified as a "designated" or "rated" officer. Flight Training includes programs for pilots of all Services, navigators in the Air Force, and naval flight officers in the Navy and Marine Corps. Pilot training may be in jet or propeller-driven fixed-wing aircraft, or in helicopters. Some related advanced flight training, such as Army instructor pilot training and Air Force navigator/bombardier and electronic warfare training, is also included in Flight Training. Enlisted programs in aviation-related subjects (for example, in air traffic control) and Air Force survival training have been placed, for purposes of this report, in Specialized Skill Training.

Flight Training loads, by Service and component, for Fiscal Years 1974 through 1978 are shown in the following table.

Total Flight Training Loads, FY 1974-78

Service Component	FY 74	FY 75	FY 76	FY 7T	FY 77	FY 78
Army						
Active	704	701	785	752	818	818
Reserve	16	18	15	10	10	10
Natl Guard	69	40	36	22	22	22
Navy						
Active	1,739	1,486	1,409	1,329	1,310	1,310
USMC						
Active	988	1,053	919	912	773	773
Air Force						
Active	4,062	3,138	2,554	2,800	2,656	2,663
Reserve	48	50	29	32	28	28
Natl Guard	137	146	100	96	98	98
DoD						
Active	7,493	6,378	5,667	5,793	5,557	5,564
Gd/Res Tot	270	254	180	160	158	158
DoD Total	7,763	6,632	5,847	5,953	5,715	5,722

Flight Training loads are considerably reduced between FY 1974 and 1976 because of the net effect of the following factors:

1. Refinements in the computation of aviator mobilization requirements and aviator inventories in all Services.

2. Moderate increases in Army aviator requirements associated with the 16-division force objective.

3. Restriction of undergraduate flight training for Reserve Component members to the number needed to fill positions in reserve aviation units which cannot be filled through recruitment of experienced aviators leaving active duty -- as, for example, positions in aviation units which are remote from major population centers.

For purposes of clarity, the following discussion of aviation training is divided into four sections, each of which treats a subcategory of Flight Training and the inputs, outputs, and loads attributable to that type of training in FY 1976 through 1977.

Flight Familiarization Training

Flight Familiarization Training is a relatively small and economical primary pilot training program, conducted by each of the Services, which is closely identified with officer acquisition programs. Its purpose is two-fold: (1) as an incentive, to motivate qualified candidates toward an aviation career, and (2) as a screening device, to identify those candidates most likely to be successful in flying. In connection with the latter purpose, early identification of personnel who lack the desire or potential to become aviators lowers the attrition rate in subsequent, more costly, flight training courses.

A limited number of Military Academy cadets and Naval Academy midshipmen participate in Flight Familiarization Training. Air Force Academy cadets who volunteer and are physically qualified receive similar training during their last year at the Academy. Service ROTC and other college-based officer acquisition programs offer this training to some (in the case of Air Force ROTC, most) qualified students.

In addition to the training connected with officer acquisition programs, the Air Force conducts a separate flight screening program for other candidates for Undergraduate Pilot Training. In the other Services this purpose is accomplished during the first phase of Undergraduate Pilot Training.

Data showing the scope of these programs are displayed in the following table. Workload data attributable to students in officer acquisition programs (noted in parentheses) are not additive to total Service loads, since they are either already within other Service loads or are included in participation data for ROTC and similar programs.

Training Inputs, Output, Loads, Flight Familiarization Program, FY 1976, 7T, 77

Service Component	FY 76			FY 7T			FY 77
	Input	Output	Load	Input	Output	Load	Load
Army, All Components	(452)	(372)	-	(52)	(52)	-	-
Navy, All Components	(1,159)	(843)	-	(300)	(225)	-	-
USMC Reserve	(225)	(200)	-	(56)	-	-	-
Air Force							
Active	279	236	15	39	42	8	11
Reserve	27	25	2	-	-	-	2
Natl Guard	95	85	5	23	21	4	5
USAF Academy and ROTC	(2,690)	(2,380)	-	(460)	(158)	-	-
DoD							
Active	279	236	15	39	42	8	11
Gd/Res Total	122	110	7	23	21	4	7
DoD Total	401	346	22	62	63	12	18

Undergraduate Pilot Training

The purpose of Undergraduate Pilot Training is to qualify students to perform the basic duties and assume the responsibilities of military pilots. Courses include sufficient flying training to allow the student to attain proficiency in the general class of aircraft (jet, prop, or helicopter) he will be flying in future assignments. Training through flying or in flight simulators is augmented by flight-related ground training and, ordinarily, some officer professional development training to prepare the student for the responsibilities of a junior officer. For the Army, which uses a large number of warrant officer pilots, an augmented course serves additionally as a warrant officer candidate school. The

Navy also conducts Navy officer training for aviation officer candidates concurrently with flight training. Training data for FY 1976-77 are displayed in the following table:

Training Inputs, Output, Loads, Undergraduate Pilot Training, FY 1976, 7T, 77

Service Component	FY 76 Input	FY 76 Output	FY 76 Load	FY 7T Input	FY 7T Output	FY 7T Load	FY 77 Load
Army							
Active	1,055	792	663	264	199	663	729
Navy							
Active	1,195	1,030	1,037	300	225	957	938
USMC							
Active	400	360	481	100	90	424	405
Air Force							
Active	2,010	1,800	1,557	621	449	1,788	1,688
Reserve	27	21	22	6	6	24	22
Natl Guard	85	71	72	12	18	72	72
DoD							
Active	4,660	3,982	3,738	1,285	963	3,832	3,760
Gd/Res Tot	112	92	94	18	24	96	94
DoD Total	4,772	4,074	3,832	1,303	987	3,928	3,854

The Army conducts all undergraduate helicopter pilot training for its own personnel and for the Air Force (Army does not conduct any fixed-wing Undergraduate Pilot Training). The student body consists of Army and Air Force commissioned officers and Army warrant officer candidates, for whom the course, suitably augmented, is also a warrant officer candidate school. The following table shows programmed course length and projected attrition rates for FY 1976 for each type of student.

Course Length and Attrition Rates, Undergraduate Helicopter Pilot Training, FY 1976

	Army Officers	Air Force Officers	Army Warrant Officer Candidates
Course Length (Weeks)	36.4	36.4	38.4
Attrition Rate (Percent)	10	11	25

Combined load data for these courses are shown below. All participants are in the active force.

Training Inputs, Output, Loads, Undergraduate Helicopter Pilot Training, FY 1976, 7T, 77

	FY 76			FY 7T			FY 77
Service	Input	Output	Load	Input	Output	Load	Load
Army	1,055	792	663	264	199	663	729
(Officers)	(322)	(463)	(300)	(81)	(116)	(300)	(321)
(Warrant Candidates)	(733)	(329)	(363)	(183)	(83)	(363)	(408)
Air Force	59	50	38	14	12	36	40

The Navy conducts Undergraduate Pilot Training for all Navy and Marine Corps students. The training begins with a common core of basic ground training and primary flight training and then diverges according to whether the student is to be qualified in jet aircraft or helicopters (Marine Corps) or jets, helicopters, or propeller aircraft (Navy). The basic ground phase, or environmental indoctrination phase, is four weeks in length for officer students and 11 weeks for aviation officer candidates, since this phase also serves as an officer training period for the latter group.

The following table shows course lengths, attrition rates, and aircraft used for training for each phase of the syllabus.

Course Phasing, Navy/Marine Corps Undergraduate Pilot Training

Course Phase	Course Length (Weeks)	Attrition Rate (Percent)	Type Aircraft
Environmental Indoctrination			
Aviation Officer Candidates	11	10	-
Officers	4	2	-
Primary (all students)	6	8	T-34B
Jet Training			
Basic Jet	24	11	T-2
Advanced Jet	18	4	TA-4
Prop Training			
Basic Prop[a/]	20	14	T-28
Advanced Prop	17	2	TS-2A
Helicopter Training			
Pre-Helo Basic Prop[a/]	20	14	T-28
Primary Helo	5	1	H-57
Advanced Helo	11	1	H-1

a/ Conducted as a single combined phase.

Because of the variation in course content, the standard Undergraduate Pilot Training course is as short as 46 weeks for an officer student qualifying in helicopters or as long as 59 weeks for an aviation officer candidate qualifying in jets. Actual course lengths may be longer because of unforeseen circumstances such as major aircraft groundings, fuel shortages, or inclement weather. Attrition rates vary considerably, depending on the source of the student, from 15 percent for Regular Navy officers to 30 percent for aviation officer candidates.

The following table displays load data for the Navy and Marine Corps for FY 1976-77. All participants are in the active force.

Training Inputs, Output, Loads, Navy/Marine Corps Undergraduate Pilot Training, FY 1976, 7T, 77

Service	FY 76 Input	FY 76 Output	FY 76 Load	FY 7T Input	FY 7T Output	FY 7T Load	FY 77 Load
Navy	1,195	1,030	1,037	300	225	957	938
Jet	(553)	(405)	(482)	(139)	(105)	(471)	(474)
Prop	(374)	(400)	(339)	(94)	(70)	(284)	(270)
Helo	(268)	(225)	(216)	(67)	(50)	(202)	(194)
USMC	400	360	481	100	90	424	405
Jet	(164)	(148)	(241)	(41)	(36)	(208)	(199)
Helo	(236)	(212)	(240)	(59)	(54)	(216)	(206)

The final type of Undergraduate Pilot Training is Air Force training of jet pilots. The standard course length is 48.5 weeks. Forecasted attrition for FY 1976 is 18.5 percent, not including that which occurs in the flight screening of the Flight Familiarization Training program. Load data for FY 1976-77 are shown in the following table:

Training Inputs, Output, Loads, Air Force Undergraduate Jet Pilot Training, FY 1976, 7T, 77

	FY 76 Input	FY 76 Output	FY 76 Load	FY 7T Input	FY 7T Output	FY 7T Load	FY 77 Load
Active	1,951	1,750	1,519	607	437	1,752	1,648
Reserve	27	21	22	6	6	24	22
Natl Guard	85	71	72	12	18	72	72

At the conclusion of Undergraduate Pilot Training, the new pilot is capable of operating an aircraft in such a manner that future training required, in order to accomplish a specific mission, is limited to transition to aircraft used in operational units and the employment of applicable mission weapon systems.

Undergraduate Navigator Training

The Navy trains its own personnel and Marine Corps personnel to become Naval Flight Officers. The Air Force trains its own personnel as navigators. Since the duties of Naval Flight Officers and Air Force navigators are essentially similar, they are referred to collectively in this report as "navigators". The Army does not train or use navigators.

The Naval Flight Officer training program begins with the same ground training phase given to pilots -- four weeks for officers, 11 weeks for aviation officer candidates. This is followed by a basic 24 week phase covering navigation, meteorology, radar systems, and other fundamentals, and including some simulator and in-flight training in practical flight skills. A student then proceeds to one of five advanced phases: radar intercept officer (10 weeks); basic jet navigator (4 weeks); airborne electronic warfare officer (8 weeks); airborne tactical data systems officer (12 weeks); or multi-engine navigator (8 weeks). The overall course syllabus length is 32 to 47 weeks, with an attrition rate of about 35 percent.

The Air Force undergraduate navigator training courses include academic instruction in navigation procedures and equipment and practical simulator and in-flight training involving navigation under a variety of mission conditions. Course length in FY 1976 will be 33 weeks, three weeks less than in FY 1974. The course attrition rate is 12 percent.

Undergraduate Navigator Training provides sufficient skills and knowledge so that further training for the newly rated navigator can be limited to transition to aircraft used in operational units and employment of applicable weapons systems. Training load data for Undergraduate Navigator Training in FY 1976-77 are shown in the following table.

Training Inputs, Output, Loads, Undergraduate Navigator Training, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Navy							
Active	710	460	372	178	113	372	372
USMC							
Active	194	159	122	49	40	124	111
Air Force							
Active	922	900	578	231	225	580	542
Reserve	5	4	3	-	1	4	3
Natl Guard	26	24	16	7	6	16	16
DoD							
Active	1,826	1,519	1,072	458	378	1,076	1,025
Gd/Res Tot	31	28	19	7	7	20	19
DoD Total	1,857	1,547	1,091	465	385	1,096	1,044

Other Flight Training

This category covers miscellaneous other types of flight training as described below by Service. Load data for FY 1976-77 are summed up at the end of this section.

The Army includes in this category courses for instructor pilots and specific pilot qualification courses in various aircraft. Most of the courses are short, in the range of two to seven weeks.

The Navy does not report training in this category, inasmuch as postgraduate flight training is conducted under operational command auspices. The Marine Corps data include post-graduate advanced pilot and navigator training designed to provide training in a particular aircraft community before assignment to an operational squadron. The Air Force Other Flight Training workload is limited largely to instructor courses for pilots and navigators and some specialized courses conducted by the Air Training Command in such fields as electronic warfare. Most Air Force post-graduate flight training is conducted under operational command auspices.

Training Inputs, Output, Loads, Other Flight Training, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	743	673	122	186	168	89	89
Reserve	94	78	15	24	24	10	10
Natl Guard	213	177	36	53	53	22	22
USMC							
Active	691	691	316	159	159	364	257
Air Force							
Active	2,014	1,942	404	550	506	424	415
Reserve	5	5	2	2	2	4	1
Natl Guard	31	31	7	5	5	4	5
DoD							
Active	3,448	3,306	842	895	833	877	761
Gd/Res Tot	343	291	60	84	84	40	38
DoD Total	3,791	3,597	902	979	917	917	799

Advanced Flight Training

In each of the Services, graduates of undergraduate pilot and undergraduate navigator training receive supplementary training in the specific aircraft they will be flying on operational missions. Emphasis is placed on crew training and performance under conditions which would be encountered in combat. In the Army most of this training is provided as part of normal unit training by the operational unit to which the new pilot is assigned. In the other Services, this additional training is provided by Navy readiness squadrons, Marine combat crew readiness training groups, and Air Force combat crew training squadrons. Much of the training activity conducted by these specialized units is "crew and unit training." Marine Corps advanced flight training loads are included within Other Flight Training loads, as is centrally-conducted Army advanced flight training. However, most such training is considered "crew and unit training" by the Navy and Air Force and is not included in the loads of this report.

Determination of Requirements for Rated Officers

Flight Training rates are developed by comparing projections of future requirements for rated officers with projections of the future status of inventories of rated officers. Due consideration is also given to the need to have sufficient aviators on hand, in appropriate grades, to fill positions in operational units. Requirements for rated officers include both the numbers needed to man the force in peacetime and the additional increment needed initially when war breaks out to man and sustain the force until training output can be expanded. For analytical purposes, pilot requirements can be divided into two parts: the core and the supplement.

Core requirements represent the number of rated officers needed to carry out normal peacetime operational, management, and training activities for forces currently programmed. Each authorized position (that is, military space or billet) in the core requires a rated officer as an incumbent in order to carry out the functions of the job, either because the job involves flying duties or requires flying experience. Other positions which may be occupied by rated officers for career broadening or similar purposes, but which do not require rated officer incumbents for accomplishing the duties, are not core positions. The core has three subcomponents: force, training and supervision.

Force requirements are the positions required to man and operate the Services' force aircraft. The number of force positions is a product of established crew ratios, or the number of crews per aircraft, which in turn take into account peacetime workload (flying hour) factors and the amount of operational flying and unit flight training which is necessary.

Training positions include the pilots and navigators who are conducting or receiving formal flight training. Students in undergraduate flight training, who are not yet "rated," are not included.

The supervision component is made up of officer positions entailing actual supervision of flying and flight-related activities and the performance of staff jobs which require the expertise of a rated officer.

The supplement is the difference between the number of rated officers required for the approved wartime scenario and the number required in the core. Supplement requirements are based on two considerations: (1) the demand for rated officers is greater in wartime than in peacetime; upon the beginning of war, training pipelines to and from the theaters of war, combat casualties, and higher crew ratios immediately create additional requirements for rated officers; (2) flight training takes a significant amount of time, that is, requires a long "lead time." There should be enough pilots and navigators on hand in peacetime to be able to execute the planning scenario, with prudent risk, until flight training programs can be brought to higher production levels.

The sum of the core and the supplement for each Service determines each Service's current and projected requirement for rated officers.

Rated Officer Inventory Projections

Projecting rated officer inventories into the future must be based on historical experience, current judgment, and an appraisal of how the officers will react to conditions in the future (i.e., pay, morale, state of the civilian economy, civilian airline hiring plans, family satisfaction with service life, etc.). These estimates are projected for at least five years in the future. Comparisons are then made against the computed requirements, and training rates for the entire five-year period are adjusted This process is repeated each year so that adjustments can be made in training rates based on changes in requirements and/or updated inventory projections. This continuing process of adjustment is necessary to insure that the correct number of trained rated officers will be available in the future without large and expensive fluctuations in training rates.

Training Rate Adjustments

When a comparison of requirements and inventories discloses a shortage or overage of projected rated officers, training rates are adjusted upward or downward in order to bring the program back into balance. For example, if FY 1981 pilot requirements exceed projected inventories by 1,000, an increase in training rates (that is, output or production) of pilots of 200 per year starting in FY 1977 may be appropriate. Inputs into the training program would start in FY 1976 in order to obtain the first increase in desired output in FY 1977. This process would be repeated at least once each year, with adjustments made as necessary.

Determination of Training Loads

The process described above, through continuous updating of the comparison between projected rated officer requirements and inventories, leads to a requirement for phased output from the flight training establishment. The desired annual output, considering the anticipated attrition rates and the planned course lengths, as discussed in the preceding sections on the various types of flight training, establishes the size of the input necessary to achieve the target output. Training loads are then calculated, using these factors, to determine the average number of students on hand during the training year. For FY 1976-77, the recommended loads are those displayed previously in this chapter.

VII

PROFESSIONAL DEVELOPMENT EDUCATION

General Description

The purpose of Professional Development Education is to provide training and education to prepare military personnel to perform the increasingly complex tasks which will become their responsibilities as they progress in their military careers. Whereas Specialized Skill Training is directed toward specific job skills, Professional Development Education is concerned with broad professional development goals in such subjects as military science, engineering, medicine, and management. Professional Development Education is conducted at both military and civilian institutions. Some enlisted personnel participate in courses included in this category, as for example, in senior noncommissioned officers leadership courses. However, most of the programs in this category are for the professional development of officers.

For purposes of this report, Professional Development Education excludes officer acquisition programs, which are shown under Officer Acquisition Training. It includes senior enlisted leadership training, usually carried as specialized training, in recognition of the broad professional content of these courses, as opposed to the narrower skill-oriented training typical of most enlisted training programs.

Training loads for FY 1974-78 are as shown in the following table.

Total Professional Development Education Loads, FY 1974-78

Service Component	FY 74	FY 75	FY 76	FY 7T	FY 77	FY 78
Army						
Active	5,868	5,153	4,544	3,986	4,456	4,456
Reserve	103	107	123	123	123	123
Natl Guard	69	74	72	73	73	73
Navy						
Active	5,723	5,002	3,813	3,113	2,915	2,862
Reserve	24	26	33	37	23	23
USMC						
Active	1,079	974	834	484	739	741
Reserve	16	18	18	56	18	18
Air Force						
Active	4,889	5,018	4,979	5,120	4,973	4,873
Reserve	49	71	58	72	58	58
Natl Guard	39	40	39	32	39	39
DoD						
Active	17,559	16,147	14,170	12,703	13,083	12,932
Gd/Res Total	300	336	343	393	334	334
Total	17,859	16,483	14,513	13,096	13,417	13,266

The first three subcategories of Professional Development Education are officer professional development courses. These courses are at three levels: basic, intermediate, and senior.

Education in the military school system is fundamental to the development of military officers who are fully qualified to perform duties of high responsibility in both war and peace. In most non-military professions, growth in ability and knowledge is gained through experience. In the military, opportunities for full practice of the profession are limited to wartime, and even those officers with combat experience have not had the opportunity for thorough exercise of the decision skills they would require, for example, in a war in NATO Europe. The military school system serves partially to fill this void by educating the military officer in the skills and knowledge needed to perform his duties in a variety of situations, both in peacetime and wartime.

In addition to their courses for active force officers, most schools in this category present abbreviated courses for Reserve Component officers. Large numbers of other military students are provided instruction through non-resident correspondence courses.

Basic Officers Professional Schools

The Marine Corps and Air Force conduct basic officer courses for officers with some experience in operational units which are Service-wide in scope and are, therefore, carried in this report under Professional Development Education. The Army and Navy conduct courses which are at a similar level, but which are oriented toward specific skills (e.g., the Navy's Destroyer Officers Course) or somewhat broader skills within a specific part of the Service (e.g., the Army's Armor Officer Advanced Course). The Army and Navy courses, because of their specialization, are treated in this report as part of Specialized Skill Training.

The Marine Corps Amphibious Warfare Course is designed to prepare officers in the grade of captain or major for duties in battalion or squadron command or on regimental-level staffs. The course length is 39 weeks. The Air Force Squadron Officer School is an 11-week course designed to prepare selected captains and lieutenants, after completion of some active service experience, for command and staff duties appropriate to their grades.

The training load data for FY 1976-77 associated with these Marine and Air Force courses are displayed in the following table.

Training Inputs, Output, Loads, Basic Officers Professional Schools, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
USMC							
Active	171	171	127	180	-	72	135
Reserve	175	175	7	175	175	28	7
Air Force							
Active	3,040	3,040	643	777	777	648	643
Reserve	6	6	1	1	1	-	1
Natl Guard	21	21	4	6	6	4	4
DoD							
Active	3,211	3,211	770	957	777	720	778
Res/Gd Tot	202	202	12	182	182	32	12
Total	3,413	3,413	782	1,139	959	752	790

Intermediate Service Schools

Each of the Services maintains a Command and Staff College. In addition, the Navy operates the Armed Forces Staff College, a joint institution with students from all Services. While there are differences in approach and curriculum based on the requirements of the parent Service, each of the courses is designed to prepare officers for command and staff duties at all echelons of their parent Services and in joint or allied commands. A relatively small number of officers from each Service attends one of the Command and Staff Colleges of the other Services; a few attend allied schools at the same level. Attendance at the Intermediate Service Schools is on a selective basis.

The following table lists the Command and Staff Colleges and their respective course lengths. In addition to the principal courses, the Service colleges individually conduct various courses for reserve component officers and a variety of non-resident courses.

Intermediate Service Schools

Schools	Location	Course Length (Weeks)
Armed Forces Staff College	Norfolk, VA	22
Army Command and General Staff College	Fort Leavenworth, KA	38
College of Naval Command and Staff	Newport, RI	40
Marine Corps Command and Staff College	Quantico, VA	42
Air Command and Staff College	Montgomery, AL	43

Another school in the Intermediate Service Schools category is the Defense Systems Management School at Fort Belvoir, Virginia. This is a joint school which conducts a primary 20-week course in management concepts and methods with the major purpose of preparing selected military officers and DoD civilian personnel for assignments in program or project management.

Load data for military personnel attending Intermediate Service Schools for FY 1976-77 is shown in the following table:

Training Inputs, Output, Loads, Intermediate Service Schools, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	1,905	1,905	908	1,791	1,791	908	908
Reserve	2,129	2,129	104	2,129	2,129	104	104
Natl Guard	838	838	55	838	838	56	56
Navy							
Active	362	358	220	220	64	205	235
USMC							
Active	182	182	134	160	22	84	134
Reserve	170	170	7	165	165	24	7
Air Force							
Active	686	686	555	604	-	408	555
Reserve	132	132	14	12	-	8	14
Natl Guard	132	132	14	12	-	8	14
DoD							
Active	3,135	3,131	1,817	2,775	1,877	1,605	1,832
Res/Gd Tot	3,401	3,401	194	3,156	3,132	200	195
Total	6,536	6,532	2,011	5,931	5,009	1,805	2,027

Senior Service Colleges

Each of the Military Departments maintains a Senior Service College, or "War College". In addition, there are two joint Senior Service Colleges, the National War College and the Industrial College of the Armed Forces, attended by students from all four Services. Senior Service College attendance is on a highly selective basis; students are chosen by Service selection boards from among the most promising officers in the lieutenant colonel/colonel, commander/captain grades.

The common purpose of the Senior Service Colleges is to prepare students for senior command and staff positions at the highest levels in the national security establishment and the allied command structure. The unifying focus is the study of national goals. The Service colleges, while concentrating on the employment of that Service in the defense mission, also include the study of the employment of the forces of other Services. All of the colleges integrate the study of economic, scientific, political, sociological, and other factors into the consideration of national security problems. The Industrial College, in its approach to national security problems, emphasizes the use and management of national resources. The length of the principal course is ten months. Most colleges also conduct shorter special-purpose seminar-type courses.

Load data for FY 1976-77 for the Senior Service Colleges are shown in the following table.

Training Inputs, Output, Loads, Senior Service Colleges, FY 1976, 7T, 77

Service Component	FY 76			FY 7T			FY 77
	Input	Output	Load	Input	Output	Load	Load
Army							
Active	489	489	275	489	184	275	275
Reserve	159	159	12	159	111	12	12
Natl Guard	104	104	9	104	60	9	9
Navy							
Active	184	183	165	182	3	103	170
USMC							
Active	52	61	44	51	20	24	43
Reserve	29	29	1	-	-	-	1
Air Force							
Active	356	356	325	353	-	268	325
Reserve	76	76	7	6	-	4	7
Natl Guard	42	42	6	6	-	4	6
DoD							
Active	1,081	1,089	809	1,075	207	670	813
Res/Gd Tot	410	410	35	275	171	29	35
Total	1,491	1,499	844	1,350	378	699	848

Enlisted Leadership Training

The courses included in this category are intended to provide senior enlisted personnel the skills and knowledge needed to assume the responsibilities of the highest non-commissioned officer grades. These courses are the culmination of formal enlisted training and are, for enlisted personnel, analogous to the officer courses discussed in the preceding sections. In addition to such subjects as methods of leadership, human relations, discipline and training, and the administration and employment of military organizations, the senior non-commissioned officer, in these higher-level schools, is given a broader perspective of the role and functions of his or her Service.

Schools, locations and course lengths are shown below:

School	Location	Course Length (Weeks)
Army: Sergeants Major Academy	Fort Bliss, TX	22
Marine Corps: Staff NCO Academy	Quantico, VA	6
Air Force: Senior NCO Academy	Gunter AFB, AL	9

Loads for Enlisted Leadership Training for FY 1976-77 are shown below:

Training Inputs, Output, Loads, Enlisted Leadership Training, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army							
Active	403	403	163	219	35	163	163
Reserve	23	23	7	15	7	7	7
Natl Guard	24	24	8	16	8	8	8
USMC							
Active	554	510	63	110	2	20	63
Reserve	25	25	3	10	5	4	3
Air Force							
Active	1,153	1,153	200	231	231	160	200
Reserve	15	15	2	3	3	4	2
Natl Guard	32	32	6	6	6	4	6
DoD							
Active	2,110	2,066	426	560	268	343	426
Res/Gd Tot	119	119	26	50	29	27	26
Total	2,229	2,185	452	610	297	370	452

Graduate Education for Validated Billets

The Department of Defense, like other large and complex governmental or private organizations, needs officers with specialized advanced knowledge, at a level attainable only through graduate education, to perform effectively in certain military jobs. The purpose of the graduate education program in each of the Services is to provide graduate-level education in required disciplines to the numbers of officers required to maintain an inventory of officers qualified to fill these jobs. Under the program described in this section, military officers undergo graduate education on a full-time, fully-funded basis.

The following table displays training load data for this program for FY 1976-77. All participants are members of the Active Services.

Training Inputs, Output, Loads, Graduate Education for Validated Billets, FY 1976, 7T, 77

Service Components	FY 76			FY 7T			FY 77
	Input	Output	Load	Input	Output	Load	Load
Army	512	625	899	197	60	899	840
Navy	622	668	1,049	386	287	1,053	970
USMC	42	25	50	25	5	60	47
Air Force	916	879	1,300	322	291	1,288	1,190
DoD Total	2,092	2,197	3,298	930	643	3,300	3,047

An officer graduate student may attend either a civilian educational institution or one of two Service institutions, the Naval Postgraduate School or the Air Force Institute of Technology. Curricula in these two schools emphasize military-unique courses, such as in logistics management or intelligence operations, and military applications in all other courses. While these schools are primarily used by the parent Services (including Marine Corps use of the Naval Postgraduate School), they also train some students from other Services. The following table displays programmed FY 1976 student loads for these two schools by the parent Services of the students making up the load.

Graduate Education Loads at Service Institutions, FY 1976

	Army	Navy	Marine Corps	Air Force	Total
Naval Postgraduate School	49	829	42	13	933
Air Force Institute of Technology	7	10	0	460	477

Requirements for graduate-educated officers depend upon the number of "validated billets" -- that is, military positions which have been determined to require an incumbent with graduate-level education in the applicable academic discipline. Each Service has established a system, ordinarily culminating in a board of senior officials in the Service headquarters, which examines the duty prerequisites for each billet which is nominated for validation and determines if the job does, in fact, require an officer with an advanced degree. The number of validated billets in FY 1976 is displayed in the following table:

Validated Billets, FY 1976

Army	Navy	Marine Corps	Air Force	DoD
5,556	5,200	480	9,810	21,046

Through intensive review of job requirements, the numbers of validated billets have been reduced by approximately 2,700 positions since FY 1974. Except for these changes resulting from position-by-position reviews, the numbers of validated billets have remained relatively stable over the past five years despite extensive changes in the size and composition of the force. This stability is brought about by two major factors. First, very few validated billets are in force units; most are in other activities, such as management, research and development, or Service Academy faculties, which are not appreciably influenced by changes in total force size. Second, the advance of technology and the drive for better management inevitably force up the demand for Service managers with advanced knowledge. In the face of this pressure for additional validated billets, the Service validation systems operate to require full justification for new validations and to revoke the validations of positions with less merit. In addition to determining if a billet requires a graduate-educated officer, the Services also determine if the job could be done by a qualified civilian employee. If it can, the position is considered for conversion to civilian incumbency.

If all validated billets are to be filled with qualified personnel, it is necessary to have an inventory in each required discipline which is larger than the number of billets. This additional increment is needed because qualified officers must be rotated from positions requiring their educational expertise to command and other operational positions with force units. This rotation is necessary to give the officers operational experience appropriate to their grades. This operational experience, while desirable for other reasons (so that all personnel share in duty outside the United States or under hazardous conditions, and so that desired career development patterns can be followed), is also a prerequisite for proper performance in a validated billet. Up-to-date operational experience, is, in most cases, as important as advanced academic knowledge in qualifying an officer for a validated billet; if it were not, there would be reason to fill the position with a civilian. Rotation also requires a small measure of "pipeline time" between assignments, which adds another increment to the inventory requirement.

The Department of Defense is continuing a concentrated effort to keep the size of the fully-funded graduate education program as small as possible, consistent with meeting the requirement for qualified officers. Some of the methods being used in this effort are:

- Systematic review of validated billets to assess the need for graduate-educated incumbents, including a determination of whether the position requirements can be met by education short of a degree.

- Reliance, to the extent possible, on less costly means of education, such as delaying entry of ROTC graduates while they complete postgraduate programs and encouraging and supporting off-duty or part-time study.

- Intensive management of the inventory of graduate-educated officers.

Through reliance on these management actions, training loads in the fully-funded graduate education program will be 28 percent smaller in FY 1976 than in FY 1973, and 13 percent smaller than the FY 1976 program presented in the Military Manpower Training Report for FY 1975. All aspects of the program will continue to receive close examination and careful management.

Other Degree-Completion Programs

In addition to the programs designed to satisfy validated requirements, there are several programs designed to permit selected individuals an opportunity to work toward or obtain an associate, baccalaureate or advanced degree. These programs benefit the Services in several important ways: they increase the technical qualifications of the individuals in the program; they improve the general educational level of Service personnel; and they provide career retention and recruiting incentives to outstanding personnel. In addition, whenever possible, personnel in advanced education programs are later used to satisfy validated requirements and hence reduce the required student load in graduate education for validated billets.

The degree-completion programs are managed by the individual Military Departments and each has its own selection criteria. However, in general a person is not selected for a program unless the education will enhance his professional development and be of use to the Military Department. All of the programs require a payback from the individual.

Load data for these programs for FY 1976-77 are shown below. All participants are in the Active Forces.

Training Inputs, Output, Loads, Other Degree Completion Programs, FY 1976, 7T, 77

Service	FY 76			FY 7T			FY 77
Component	Input	Output	Load	Input	Output	Load	Load
Army	1,538	1,423	1,962	614	225	1,617	1,934
Navy	118	1,196	1,084	58	49	199	210
USMC	227	337	416	103	24	224	317
Air Force	25	17	64	25	3	68	75
DoD Total	1,908	2,973	3,526	800	301	2,108	2,536

The following table displays loads for other degree completion programs divided into loads for graduate degree programs and other degree (baccalaureate or associate) programs. The graduate degree programs are all partially funded with the exception of the fully-funded Law Education Program, authorized by Public Law 93-155 in 1973, which provides legal education to qualify selected officers as military lawyers. The first students entered the program in FY 1974; when the program reaches its authorized size in FY 1977, the total annual student load will level off at approximately 75 for each of the three Military Departments.

Training Loads, Other Degree
Completion Programs, FY 1976, 7T, 77

Service Component	Graduate Degree			Other Degree		
	FY 76	FY 7T	FY 77	FY 76	FY 7T	FY 77
Army	688	563	769	1,274	1,054	1,165
Navy	49	50	50	1,035	149	160
USMC	54	52	57	362	172	260
Air Force	64	68	75	-	-	-
DoD Total	855	733	951	2,671	1,375	1,585

Total loads in these programs in FY 1976 are 29 percent below the level originally requested for FY 1975, mainly because of the phasing out, at the direction of the Congress, of certain education programs for enlisted personnel. Inputs to these programs ceased in November 1974. Loads decline further in FY 1977 as participants already enrolled complete their studies.

Other Full-Time Education (Non-Degree Programs)

Short-course training provides the Military Services with needed skills in a wide variety of scientific, administrative and other fields. These programs are selected to train personnel in job-oriented skills which can best be acquired through abbreviated courses. Accounting, traffic management and aviation safety are examples of skills involved. Some of this included training is conducted in DoD schools, the remainder in civilian institutions.

The following table displays FY 1976-77 load data for this category.

Training Inputs, Output, Loads, Other Full-Time Education, FY 1976, 7T, 77

Service Component	FY 76			FY 7T			FY 77
	Input	Output	Load	Input	Output	Load	Load
Army							
Active	960	900	22	240	140	55	22
Navy							
Active	3,603	3,591	458	949	745	413	489
Reserve	246	246	33	247	150	37	23
Air Force							
Active	6,199	6,213	563	1,567	1,450	472	525
Reserve	175	175	10	39	39	16	10
Natl Guard	162	162	9	19	19	12	9
DoD							
Active	10,762	10,704	1,043	2,756	2,335	940	1,036
Res/Gd Tot	583	583	52	305	208	65	42
DoD Total	11,345	11,287	1,095	3,061	2,543	1,005	1,078

Health Professionals Education

This subcategory is made up of a wide variety of courses for personnel of all health professions -- physicians, dentists, nurses, medical administrators, etc. The majority of the courses offered are conducted in military medical facilities, and vary in length from a few days to a full year. Some training is conducted at civilian medical institutions, including, in the case of the Army, some (FY 1976 load: 245) advanced degree programs. The purpose of Health Professionals Education is to expand the skills of military medical personnel and to provide them timely information on the latest techniques in their fields. Educational programs connected with the acquisition of health professionals is carried in this report under Officer Acquisition Training.

The following table shows load data for FY 1976-77 for this program.

Training Inputs, Output, Loads, Health Professionals Education, FY 1976, 7T, 77

Service Component	FY 76 Input	FY 76 Output	FY 76 Load	FY 7T Input	FY 7T Output	FY 7T Load	FY 77 Load
Army							
Active	3,389	3,451	315	1,212	1,054	69	314
Navy							
Active	903	791	837	451	213	1,140	841
Air Force							
Active	4,704	4,724	1,329	1,069	796	1,808	1,460
Reserve	234	232	24	78	77	40	24
DoD							
Active	8,996	8,966	2,481	2,732	2,063	3,017	2,615
Res/Gd Tot	234	232	24	78	77	40	24
DoD Total	9,230	9,198	2,505	2,810	2,140	3,057	2,639

A Committtee on Excellence in Education, chaired by the Deputy Secretary of Defense and including the three Secretaries of the Military Departments as members, is currently reviewing the educational programs of the Department of Defense. This review encompasses many of the programs discussed in this chapter and Officer Acquisition Training programs as well. The purpose of the review is to insure that educational requirements of the Department are being met in ways which are educationally sound and at costs which are reasonable.

VIII

TRAINING MANPOWER

General

Chapters III through VII of this report describe and explain the military training student loads requested to be authorized for each military component for FY 1976, 197T, and 1977. These student loads represent patterns and levels of training effort which require two groups of manpower: personnel to be trained, and personnel to conduct and support the training. The purpose of this chapter is to explain these requirements for manpower and to trace the relationship between the requested military training student loads and the (a) "Trainees," "Students," and "Cadets," and (b) "Individual Training" and related manpower requirements set forth in the Manpower Requirements Report for FY 1976.

In considering training manpower, it is important to distinguish between the training loads required by a Service, but conducted in part outside the Service, and the workloads representing training conducted by the Service. The former are the military student training loads summarized in the tables in Chapter I and explained in Chapters III-VII; these are the training loads requested to be authorized. These training loads determine the numbers of trainees, students, and cadets required by each Service. In contrast, the workloads, which represent training conducted by a Service, are the basis for resource requirements (manpower, and material, facilities, and funds, as well) needed to conduct and support the training which the Service executes. In some categories of training, notably Recruit Training, training loads and training workloads are for all practical purposes identical. In others, notably Specialized Skill Training and Professional Development Education, there is significant disparity.

The disparity is caused by the fact (attributable in part to joint and interservice training practices described in Chapter XI) that a Service must train a mix of students made up of: all or a portion of its own training load; portions of the training loads of other Services or Deparments, possibly including some civilians, if appropriate and required; and foreign students as appropriate and required. This means that total training workloads for a Service may be either larger or smaller than its training loads. Thus, for example, there is no necessary relation between the training loads summarized in Chapter I and the facility workloads detailed in Chapter IX. This disparity between authorized component training loads and Service training workloads indicates a need for careful appraisal of both training loads and workloads in evaluating the manpower requirements attributable to training.

Training Loads and "Trainees, Students, and Cadets"

Appendix B describes the calculation of phased training requirements, which fundamentally are based on projected shortages of trained military personnel in specific required skills. Appendix B also explains the computation of average training loads, based essentially upon these phased training requirements, training course lengths, and course attrition patterns.

As is pointed out, the average training load is an approximation of average student strength during the year, that is, student man-years utilized in full-time, formal courses of instruction wherever conducted. This number includes two types of students: temporary duty (TDY) students, assigned to force organizations but attached temporarily for training to training organizations; and permanent change of station (PCS) students assigned to training organizations.

The manyears of TDY students are attributable for manpower accounting purposes to their parent organizations and not to "Trainees and Students" within the Individuals manpower accounts shown in the Manpower Requirements Report. Only PCS students are in the Individuals accounts.

A difference always will be evident between training loads and "Trainees," "Students," and "Cadets" of the Individuals manpower account. This, in large measure, is because only part of the students reflected in the training loads are in PCS status while attending formal courses; as noted above, many are permanently assigned to a ship or base, and attend required short formal courses on a TDY basis, although carried under their permanent assignment in the Manpower Requirements Report. The Navy has a particularly large increment of TDY students. Another significant difference for this period involves the discrepancy between end strengths of the Manpower Requirements Report and average-on-board military student training loads of this report.

The factor of seasonality of enlistments has a strong influence on the end strength number of trainees, students and cadets for these three fiscal periods because of the change in the last day of the fiscal year (the day on which the end strength of trainees, students and cadets is calculated) from June 30 in FY 1976 to September 30 in FY 197T and 1977. On June 30 of the typical year Army, for example, has a PCS trainee and student population which is lower than the average for the year, since the bulk of the trainees and students on hand on that date enlisted in the poor recruiting months of March, April and May; entrants from only one good recruiting month, June, are included. On September 30, however, trainee and student end strength will be considerably higher than the average student load for a full year because of the presence of enlistees from four consecutive good recruiting months. The same effect is evident in the Navy and Marine Corps; the Air Force, being less affected by seasonality of enlistments, does not show such a large variance.

Some additional manpower accounting factors contribute to the differences. For example, some students included in training loads attend short courses en route from one "permanent" assignment to another. These personnel would be accounted "transients" rather than "students" by the manpower accounting practices which underlie the Manpower Requirements Report. In addition, some students attending command-sponsored individual training on a PCS basis are carried under the Force Support Training account rather than as "Individuals."

Workloads and Training Support Manpower Patterns

The workloads reflecting estimates of FY 1976 Service accomplishment of individual training and education are shown in the following table:

Training Workloads, by Service Performing Training, FY 1976 a/
(Thousands)

Category	Army	Navy	Marine Corps	Air Force	DoD Total
Recruit	30.1	19.5	15.3	10.8	75.7
Officer Acquisition	5.0	4.9	0.6	5.7	16.2
Specialized Skill	62.9	44.2	7.7	30.5	145.3
Flight	1.0	2.2	0.3	3.3	6.9
Professional Dev.	4.9	4.0	0.3	5.3	14.5
Total	103.9	74.8	24.3	55.6	258.6

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a/ May not add due to rounding.

The patterns of training and support manpower identified as attributable to accomplishment of these individual training and education workloads are important because they reflect significant committed resources and a major element of cost. The manpower identified as attributable to these training workloads is direct instructional and instructional support manpower (included for the most part in the Manpower Requirements Report under the functional category Individual Training); also included is Base Operating Support and other manpower attributable to the training function (carried in other functional categories in the Manpower Requirements Report). Other considerations noted earlier in this chapter may help to explain any differences in training manpower data between this report and the Manpower Requirements Report.

In addition, other manpower is identified with training conducted by the Military Services which is outside authorized load request because participating students are not normally in an active military status. These programs include ROTC and the Armed Forces Health Professionals Scholarship Program.

The following table reflects the FY 1976 military and direct-hire civilian end-strengths, as compiled for the Military Manpower Training Report, required to accomplish the workloads shown above. These figures include allocations of training support manpower for base operating support and command activities to categories of training. These allocations, for the most part, are based on training activity measured in terms of loads.

Military and Civilian Manpower in Support of Training, FY 1976 a/

(End Strength, Thousands)

Training Category	Army	Navy	Marine Corps	Air Force	DoD Total
Military					
Recruit	12.1	2.6	4.3	2.5	21.5
Officer Acquisition	2.1	1.4	0.7	2.4	6.7
Specialized Skill	43.0	18.6	4.9	17.3	83.8
Flight	1.2	12.4	3.3	15.9	32.8
Professional Dev.	1.5	1.0	1.0	1.3	4.8
Total	60.0	35.9	14.3	39.4	149.5
Civilian					
Recruit	9.6	1.2	0.9	0.8	12.5
Officer Acquisition	3.1	1.7	0.2	2.1	7.0
Specialized Skill	28.6	4.5	0.6	9.0	42.5
Flight	0.8	4.8	0.0	6.0	11.6
Professional Dev.	2.1	1.3	0.6	1.2	5.1
Total	44.2	13.4	2.2	19.0	78.8

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a/ May not add due to rounding.

The administration of the Armed Forces Health Professionals Scholarship program, not included in the table above nor in earlier tables on a load basis, requires a total of 29 direct-hire civilians.

ROTC programs, also not included in the table on the previous page nor on a load basis, require the following manpower.

College ROTC and Junior ROTC Support Manpower, FY 1976 [a]
(End Strengths, Thousands)

Training Category	Army	Navy	Marine Corps	Air Force	DoD Total
Military					
College ROTC	2.5	0.5	0.1[b]	1.4	4.5
Junior ROTC	0.2	*	*	*	0.2
Total	2.7	0.5	0.1	1.4	4.7
Civilian					
College ROTC	0.7	0.2	-	0.1	1.0
Junior ROTC[c]	*	*	*	*	*
Total	0.8	0.2	*	0.1	1.1

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* Less than 50.

[a] May not add due to rounding.

[b] Personnel supporting the Marine Corps option for Naval ROTC students.

[c] Does not include retired military personnel hired by participating schools as instructors.

The table on page VIII-5, showing training and support manpower end-strengths, collects this manpower so that manpower attributable to training is included, regardless of the functional category within which it is carried in the Manpower Requirements Report. Most of the manpower falls within the functional category Individual Training. Significant portions, however, are carried in the functional category Base Operating Support. The comparable categories of manpower in the the Manpower Requirements Report are shown in the following table.

Military and Civilian Manpower in Support of Training, FY 1976
Manpower Requirements Report a/ b/
(End Strength, Thousands)

Functional Category	Army	Navy c/	Marine Corps	Air Force	DoD Total
Military					
Individual Training	44.3	38.6	8.0	27.1	118.0
Base Operating Support d/	14.3	*	3.6	10.6	28.6
Total	58.6	38.6	11.6	37.7	146.5
Civilian					
Individual Training	23.8	14.5	2.4	7.4	48.1
Base Operating Support d/	27.1	*	*	8.3	35.4
Total	50.9	14.5	2.4	15.7	83.5

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* Less than 50.

a/ From Manpower Requirements Report for FY 1976, Chapter VIII.

b/ May not add due to rounding.

c/ Most of Navy manpower performing base operating support functions is included within Individual Training.

d/ Base Operating Support (Central Support Forces) manpower in support of training installations (from Service inputs to Manpower Requirements Report).

The following table summarizes the differences for FY 1976 between training manpower based on the Manpower Requirements Report and on data supporting the Training Report. A significant portion of the difference is attributable to the exclusions noted previously (e.g., ROTC).

Reconciliations, Military and Civilian Manpower, FY 1976 a/
Manpower Requirements Report and Training Report
(End Strength, Thousands)

	Army	Navy	Marine Corps	Air Force	DoD Total
Military					
Manpower Report (+)	58.6	38.6	11.6	37.7	146.5
Training Report (-)	60.0	35.9	14.3	39.4	149.5
Difference	-1.4	2.7	-2.7	-1.7	-3.0
Civilian					
Manpower Report (+)	50.9	14.5	2.4	15.7	83.5
Training Report (-)	44.2	13.4	2.2	19.1	78.8
Difference	6.7	1.1	0.2	-3.4	[illegible].7

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a/ May not add due to rounding.

These data reflect the basic consistency between the separate approaches. In the case of the net difference, some 2,700 military medical personnel are included in the Training Report which are included under medical categories in the Requirements Report; some 1,300 civilians are similarly included. Similar differences in treatment among other functional categories (e.g., communications) and the inherent difficulty in classifying manpower which in fact supports two or more functions further explain the apparent net difference.

IX

TRAINING ORGANIZATION AND FACILITIES

Introduction

The purpose of this chapter is to outline the organization for management of individual training within the Department of Defense and to display the major facilities where training and education activities are conducted.

Detailed management of individual training is carried out by the four Services. Each of the Services, except the Marine Corps, has a training command immediately subordinate to the Service headquarters which is responsible for most of the individual training conducted within that Service. Some training (for example, graduate education) is managed directly by the Service headquarters; a few training activities are subordinated directly to the Service headquarters. However, the most prevalent pattern of control is through a training command headquarters which manages most Service military schools, training centers, and other training facilities.

Staff Responsibilities

Within the Office of the Secretary of Defense, staff responsibility for individual training and education policies rests with the Assistant Secretary of Defense (Manpower and Reserve Affairs), with a very strong influence over the allocation and use of resources being exercised by the Assistant Secretary of Defense (Comptroller). The staffs of these two offices work especially closely together in the management of DoD individual training and education. Other OSD offices participate as appropriate -- such as Health and Environment, Program Analysis and Evaluation, Installations and Logistics, Intelligence, and Research and Development. The OSD role is generally one of policy formulation, allocation of resources, review of Service training programs, and coordination among the Services.

Within each Service headquarters, a principal staff officer has responsibility for individual training. Other staff members may have primary responsibility for certain types of training, as, for example, a Service Surgeon General for professional medical training. Other staff members have collateral responsibilities for the allocation of manpower and funds to the training function.

Primary responsibility on the Army staff for individual training rests with the Deputy Chief of Staff for Personnel and his subordinate, the Director of Military Personnel Management. Within the Navy, the principal staff officer is the Director of Naval Education and Training, the head of the Navy's training command. Headquarters, Marine Corps, manages training through the Deputy Chief of Staff for Manpower and his subordinate, the Director of Training and Education. Commanders of the separate major subordinate training activities report directly to the Commandant of the Marine Corps, dealing with the headquarters training staff. Within the Air Staff, the Director of Personnel Programs, under the Deputy Chief of Staff for Personnel, has staff responsibility for individual training.

Training Commands

The Army, Navy and Air Force each have a command headquarters which manages most of the individual training conducted by that Service.

The Army's principal training command headquarters is Headquarters, Training and Doctrine Command (TRADOC), located at Fort Monroe, Virginia. TRADOC's control is exercised through training installation and school commanders throughout the United States.

The Chief of Naval Education and Training, headquartered at Pensacola, Florida, exercises control, through subordinate functional commanders, of education and training conducted in training centers, schools and programs throughout the Navy.

Headquarters, Air Training Command, at Randolph Air Force Base, Texas, directly controls individual training centers and units.

In no instance do these Service-wide training commands have responsibility for all individual training and education conducted. The Surgeons General are responsible for most health professional and medical technical training, for example, as already noted. The training commands normally do not have responsibility for training conducted outside Major Defense Program VIII T (Training); nor do they have responsibility for all of Program VIII T, as, for example, the Military Academy and the Air University.

Training Facilities

The following section lists the principal individual training facilities of the four Services for each of the five major categories of training. Projected average training loads for FY 1976 are also provided.

Individual Training Facilities and Locations

Facility and Location	Estimated FY 76 Load*
A. Recruit Training	
Army	
Ft Bliss, TX	570
Ft Dix, NJ	4,550
Ft Knox, KY	4,970
Ft Jackson, SC	8,030
Ft Polk, LA	1,810
Ft Leonard Wood, MO	5,210
Ft Ord, CA	1,660
Ft Sill, OK	880
Ft Gordon, CA	820
Ft McClellan, AL	1,594
Navy	
Recruit Training Commands:	
Great Lakes, IL	7,803
San Diego, CA	5,852
Orlando, FL	5,852
Marine Corps	
Recruit Depots:	
Parris Island, SC	7,826
San Diego, CA	7,486
Air Force	
Military Training Center, Lackland Air Force Base, TX	10,833

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*The loads shown are "workloads" as discussed in Chapter VIII and thus, as explained there, bear no necessary relation to the training loads, shown in the table at the end of Chapter I, except in Recruit Training.

B. Officer Acquisition Training

Facility and Location	Estimated FY 76 Load
Army	
Military Academy, West Point, NY	4,150
USMA Preparatory School, Ft Belvoir, VA	256
Officer Candidate School, Ft Benning, GA	286*
Navy	
Naval Academy, Annapolis, MD	4,243
USNA Preparatory School, Newport, RI	240
Education and Training Center, Newport, RI	367
Aviation Schools Command, Pensacola, FL	221
Marine Corps	
Development and Education Command, Quantico, VA	646
Air Force	
Air Force Academy, Colorado Springs, CO	4,138
USAFA Preparatory School, Colorado Springs, CO	140
Officer Training School, Lackland Air Force Base, TX	335

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*Includes loads for WAC officer orientation course conducted at Ft McClellan, AL.

Facility and Location	Estimated FY 76 Load
C. Specialized Skill Training	
Army	
Training Centers:	
Ft Dix, NJ	1,420
Ft Knox, KY	1,474
Ft Jackson, SC	3,893
Ft Polk, LA	4,211
Ft Leonard Wood, MO	3,268
Ft Ord, CA	1,308
Service Schools:	
Engineer, Ft Belvoir, VA	1,901
Missile and Munitions, Redstone Arsenal, AL	1,434
Ordnance, Aberdeen Proving Ground, MD	2,665
Quartermaster, Ft Lee, VA	3,959
Communications-Electronics, Ft Monmouth NJ	304
Signal, Ft Gordon, GA	5,688
Transportation, Ft Eustis, VA	1,739
Chaplains, Ft Wadsworth, NY	205
Intelligence, Ft Huachuca, AZ	1,022
Field Artillery, Ft Sill, OK	4,082
Military Police, Ft McClellan, AL	1,754
Air Defense, Ft Bliss, TX	2,698
Armor, Ft Knox, KY	1,341
Infantry, Ft Benning, GA	3,938
WAC, Ft McClellan, AL	11
Army Security Agency, Ft Devens, MA	2,079
Judge Advocate General, Charlottesville, VA	114
Institute of Administration, Ft Benjamin Harrison, IN	1,987
Institute of Military Assistance, Ft Bragg, NC	574
Academy of Health Sciences, Ft Sam Houston, TX	4,741
Army Management Engineering Training Agency, Rock Island, IL	224
Army Aviation School, Ft Rucker, AL (ground training only)	1,308

Facility and Location	Estimated FY 76 Load
Navy	
Service Schools and Schools Commands:	
Great Lakes, IL	6,915
San Diego, CA	4,810
Bainbridge, MD	1,057
Orlando, FL	497
Treasure Island, CA	201
Mare Island, CA	2,356
Port Hueneme, CA	510
Philadelphia, PA	40
Oakland, CA	68
Washington, DC	35
Athens, GA	211
Newport, RI	282
Norfolk, VA	578
Dam Neck, VA	923
Indian Head, MD	278
New London, CT	1,393
Little Creek, VA	202
Coronado, CA	324
Training Centers, Groups, Units, and Detachments:	
Gulfport, MS	396
Newport, RI	336
Idaho Falls, ID	1,025
Schenectady, NY	855
Windsor, CT	170
Philadelphia, PA	43
Pearl Harbor, HI	451
Charleston, SC	557
Lakehurst, NJ	356
Memphis, TN	6,212
Pensacola, FL (Corry Station)	1,660
Dam Neck, VA	363
Norfolk, VA	833
Mayport, FL	180
San Diego, CA	1,596
Meridian, MS	891

Facility and Location	Estimated FY 76 Load
Marine Corps	
Recruit Depot, Parris Island, SC	486
Recruit Depot, San Diego, CA	875
Development and Education Command, Quantico, VA	1,299
Bases, Supply Centers, Barracks, and Air Stations:	
Barstow, CA	2
Twentynine Palms, CA	1,132
Camp Pendleton, CA	1,662
Camp Lejeune, NC	1,804
Portsmouth, VA	43
New River, NC	6
Cherry Point, NC	66
Albany, GA	58
Headquarters, Marine Corps, Washington, DC	148
El Toro, CA	44
Landing Force Training Commands:	
Little Creek, VA	47
Coronado, CA	59
Air Force	
Schools and Centers:	
Chanute Air Force Base, IL	5,496
Keesler Air Force Base, MS	7,636
Lowry Air Force Base, CO	4,430
Sheppard Air Force Base, TX	5,389
Lackland Air Force Base, TX	2,668
Fairchild Air Force Base, WA	270
Goodfellow Air Force Base, TX	1,304
Joint	
Joint Military Packing Training Center, Aberdeen Proving Ground, MD	74
Defense Mapping School, Ft Belvoir, VA	220
Defense Information School, Ft Benjamin Harrison, IN	201
Defense Language Institute, Monterey, CA	2,580

D. Flight Training

Facility and Location	Estimated FY 76 Load
Army	
Aviation School, Ft Rucker, AL	979
Navy	
Air Stations:	
Pensacola, FL	874
Meridian, MS	134
Corpus Christi, TX	293
Whiting (Pensacola), FL	479
Saufley (Pensacola), FL	199
Chase (Corpus Christi), TX	210
Kingsville (Corpus Christi), TX	210
Marine Corps	
Air Stations:	
Yuma, AZ	85
Cherry Point, NC	105
New River, NC (Helicopter)	53
Santa Ana, CA (Helicopter)	40
Auxiliary Landing Field, Camp Pendleton, CA	41
Air Force	
Flight Training Organizations:	
Columbus Air Force Base, MS	245
Craig Air Force Base, AL	206
Laughlin Air Force Base, TX	260
Moody Air Force Base, GA	270
Reese Air Force Base, TX	256
Vance Air Force Base, OK	254
Webb Air Force Base, TX	306
Williams Air Force Base, AZ	317
Sheppard Air Force Base, TX	193
Peterson Field, CO	222
Mather Air Force Base, CA	793
Randolph Air Force Base, TX	241

E. Professional Development Education

Facility and Location	Estimated FY 76 Load
Army	
War College, Carlisle Barracks, PA	221
Command and General Staff College, Ft Leavenworth, KS	1,032
Sergeants Major Academy, Ft Bliss, TX	183
Navy	
War College, Newport, RI	473
Postgraduate School, Monterey, CA	1,382
Marine Corps	
Development and Education Command, Quantico, VA	333
Air Force	
Air University Organizations:	
Maxwell Air Force Base, AL	1,730
Gunter Air Force Base, AL	208
Wright-Patterson Air Force Base, OH	814
Health Professionals Education Organizations:	
Brooks Air Force Base, TX	204
Keesler Air Force Base, MS	42
Lackland Air Force Base, TX	319
Travis Air Force Base, CA	72
Joint Schools	
National War College, Ft McNair, DC	122
Industrial College of the Armed Forces, Ft McNair, DC	127
Defense Resources Management Education Center, Monterey, CA	70
Defense Systems Management School, Ft Belvoir, VA	72
Armed Forces Staff College, Norfolk, VA	260

Note: The above list generally excludes civilian institutions at which training may be conducted.

X

TRAINING FUNDING AND COSTS

The training costs addressed in this chapter include all estimated funding in the President's Budget for Fiscal Year 1976 which has been identified as attributable to accomplishment of the training loads requested for individual military training and education. These costs differ from life-cycle costs, which would take account of retirement and other costs omitted here as not funded during FY 1976. Life-cycle depreciation costs of training facilities and equipment are not included, although training investment costs estimated for FY 1976, such as certain procurement and construction costs, are included. Training investment in instructor training is included only to the extent that costs are funded in FY 1976.

The costs in this chapter include funding for military pay and allowances for both PCS and TDY students, allocations of base operating costs in support of training, training-related operations and maintenance costs (including civilian support personnel pay and allowances), training investment costs for construction and procurement, and overhead costs attributable to training administration and command. An attempt has been made to exclude non-training-related costs associated with budget requests of training organizations or bases (e.g., maintenance support to tenant activities not having a training function).

For a given Service, the requirement for funding for training arises from two factors: first, the need to fund the pay and allowances of its own military training student loads, regardless of where or by whom the students are trained; and, second, the need to provide for the level of individual training and education effort necessary to meet the Service's commitments to accomplish training for its own and other students.

To facilitate identifying these two needs, student military pay and allowances are separately presented. Military personnel pay and allowances cost estimates are compatible with budget estimates. It is noted in this regard that all dollar figures shown in this chapter are intended to explain and supplement data in budget justification documents by relating the budget to the training activities included in this report. These data, however, do not replace or amend budget justification documents.

Funding estimates used here for costing training exclude the funding requested and justified in budget documents for programs not included in the training loads requested and explained in this report (e.g., ROTC).

The following tables reflect the important cost differences among training programs. These differences are due to the mix of training activities needed to accomplish effective and efficient training to satisfy Service manning requirements, and to the mix of training resources devoted to these training activities.

Special caution should be exercised in using these costs for comparisons among Services. Differences in missions among the Services, differing operating and training conditions, and differences in the mix of component Service training programs, can serve to degrade the soundness of comparisons based on aggregated data such as these.

Aggregate training funding, by Service and major training category, is shown in the following table.

Aggregate Funding of Individual Training by Service and Major Training Category, FY 1976

($ Millions)

	Recruit	Officer Acquisition	Specialized Skill	Flight	Professional Development	Total
Army	771.8	112.1	1,887.0	107.4	222.6	3,100.8
	(312.6)	(24.9)	(583.9)	(16.9)	(132.5)	(1,070.7)
Navy	213.3	108.3	878.5	396.3	104.1	1,700.8
	(155.8)	(74.1)	(481.5)	(31.5)	(58.5)	(801.4)
USMC	176.1	17.7	154.4	56.8	26.6	431.5
	(119.3)	(7.4)	(85.0)	(12.7)	(15.2)	(239.5)
USAF	129.0	119.6	632.3	593.6	166.6	1,641.1
	(70.8)	(40.8)	(235.2)	(34.8)	(108.3)	(489.9)
DoD	1,290.2	357.7	3,552.2	1,154.1	519.9	6,874.2
Total	(658.5)	(147.2)	(1,385.6)	(95.9)	(314.5)	(2,601.5)

NOTE: Figures in parentheses show student pay and allowances included in the figures immediately above. Totals may not add due to rounding.

The figures in parentheses in the table above relate to student pay and allowances estimated for requested military student training loads. These costs relate directly to the need for training to fill the requirement of each Service for trained personnel.

If the parenthetical figures covering student pay and allowances are subtracted from the total training funding figures for each Service and each major training category, the remainders are the funding requirements attributable to training activity carried on -- i.e., the training to be accomplished by the respective Service in the respective category. The following table summarizes the funding.

Funding of Individual Training Conducted, by Service and Major Training Category (Excluding Student Pay and Allowances), FY 1976 ($ Millions)

	Recruit	Officer Acquisition	Specialized Skill	Flight	Professional Development	Total
Army	459.2	87.2	1,303.1	90.5	90.1	2,030.1
Navy	57.5	34.2	397.0	364.8*	45.6	899.4
USMC	56.8	10.3	69.4	44.1	11.4	191.9
USAF	58.2	78.8	397.1	558.8	58.3	1,151.2
Total	631.7	210.5	2,166.6	1,058.2	205.4	4,272.6

NOTE: Totals may not add due to rounding.

* Includes $26.9 million for the carrier USS LEXINGTON, which supports carrier landing and take-off training. Annual data on "traps" (complete arrested landings) indicate that 47% of the landings supported undergraduate pilot training, 47% supported fleet and readiness squadrons, and 6% supported reserve training.

The table above includes substantial segments of cost which are not normally sensitive to significant shifts (say up to fifteen percent) in training load. These include certain command, base, facility, and equipment costs (e.g., flight simulators or the USS LEXINGTON), and other costs associated with activities or capabilities essential for training loads to be accomplished. These "fixed" costs need to be considered in program and budget adjustments because, within a reasonable range of output, they remain approximately the same and do not vary as the training load varies. They change, instead, with decisions to change the manner of accomplishing training, most often through training investment decisions.

It should be noted that, because of the nature of Defense training investment funding especially, there are often substantial year-to-year fluctuations in funding for fixed costs. These costs are termed "fixed", not because they do not change from year to year, but because their changes characteristically are not "variable" with changes in workloads from period to period. Funding of these costs reflects significant increases, however, for years in which there are major procurements of, say simulators, aircraft, or construction in support of training.

Thus, the proportion of total funding any year which is attributable to fixed costs differs significantly among the Services and among categories of training; the proportion is often as much as two-thirds of total cost and very seldom will be less than one-third of total cost. This has important implications for the extent of funding adjustments appropriate to changes in the level of activity or size of a training program. If training funds are to be adequate for the needs of a reduced program, they must be reduced by a smaller proportion than the program loads or output in order to account for the fact that all program costs simply do not vary in proportion with program activity levels. By the same token, program increases within reasonable capacity limits may not require a proportional increase in total program funding.

Training programs are affected generally by today's cost inflation, both because of price rises for goods and services and because of the pay of the military and civilian personnel involved as students, instructors, and support. Some training programs are being plagued in addition by energy cost increases. Flight Training, for example, has been affected by the burgeoning costs of aircraft fuels.

All of these factors contribute to the challenge confronting the Defense training community for further improvements in management of training, for further improvements in utilization of its trained manpower resources, and for aggressive implementation of initiatives and innovations that promise further improvements in the quality and efficiency of training.

XI

BALANCED USE OF TRAINING RESOURCES

General

It is the objective of the Department of Defense to conduct its military individual training and education programs in such such a way that students emerge from the training establishment prepared to make an effective contribution to the defense mission. Well-trained and highly motivated individuals are indispensable to mission readiness. On the other hand, individual training and education demand a large share of resources. Training facilities must be constructed and maintained, students must be transported, paid, housed and cared for, instructors must be supported, and many other costly requirements for the support of training must be met. Furthermore, about one service member in six is involved in individual training and education as a student, trainee, instructor, or in support of training. Individual training thus competes with the mission forces for scarce military manpower. For these reasons, there are strong incentives to improve efficiency in individual training in all appropriate ways.

In consequence, there are two competing objectives in individual training and education: to produce trained personnel of the highest quality, and to minimize the resources devoted to training. Clearly, it is impossible to satisfy either objective fully except at the expense of the other. It is, however, possible to strike a balance between the two through management actions which make the best use of training resources and restrict the amount of training to a level justified by operational requirements. This chapter is devoted to a discussion of some of the ways in which the balance between operational requirements and conservation of training resources is being approached.

Joint and Interservice Training

Many military students attend training courses in schools operated by a Service other than their own. Others attend schools which have faculty members from one or more Services. These types of training are characterized as either "joint" or "interservice" in accordance with the following definitions.

- A joint school or course is defined as one which is utilized by two or more of the Services and which has a faculty composed of members of two or more Services. The position of director (commandant) of a joint school usually rotates among the Services; the director is responsible, often under the direction of the Joint Chiefs of Staff, for the development and administration of the curriculum under a Defense-wide charter.

- An interservice school or course is defined as one which is administered by a single Service or agency but which instructs students from two or more Services in a curriculum developed cooperatively by the participating Services. The faculty may include members from other than the sponsoring Service.

For convenience, the term "joint training" is used in this report to represent both types of training.

There are two major potential benefits to be derived from the use of joint training. The first is that it may be less expensive to conduct a single course or school than to teach duplicative courses in two or more Services. The second benefit, which applies particularly in officer education and training, is that participation in joint training broadens the outlook of the students, counters possible tendency toward Service parochialism, and lays the groundwork for future cooperation among the Services.

Advantages and Limitations of Joint Training. Significant savings in faculties, staffs, and support establishments, and in operating costs, may be realized by reducing the total number of training activities and combining them into fewer and larger organizations. Another advantage of consolidation is better utilization of equipment and systems required to support courses of instruction. Joint training also stimulates the interchange of new training ideas and methods.

With regard to the practical limitations to the use of joint training, it is preferable for each Service to provide the first phase of training to its own new members, in order to orient and motivate them to the roles and missions of that Service and to inculcate the Service's standards, customs, and traditions. This is accomplished in Recruit Training and Officer Acquisition Training. For practical purposes, then, joint training is limited to Specialized Skill Training, Flight Training, and Professional Development Education. Beyond this consideration, perhaps the primary limitation to the extension of joint training is that Service training facilities are generally sized to accommodate only their own students, and consolidating courses or schools may require new construction. Other limitations are differing skill requirements among the Services, possible excessive travel costs if interservice facilities are not conveniently located for joint use, the diversity of equipment used by the Services, and the possibility that joint training centers would not be sufficiently flexible to meet Service needs in the event of mobilization.

The general criteria used to determine what training will be conducted jointly are that joint training should not require a major capital investment in either facilities or equipment; that the courses under consideration should have sufficient commonality to allow for common-core training or enough common equipment utilization to produce savings; and that consolidations be cost-effective.

Interservice Training in FY 1976. The following table shows, for each Service (active and Reserve Components combined), the amount of training conducted by one of the other three Services. The total amount of "interservice training" conducted is considerably larger, since the figures shown do not include the trainees from the sponsoring Service, which, in most cases, are greater in number than trainees from other Services. For example, Undergraduate Pilot Training conducted by the Navy and participated in by the Marine Corps has over twice as many Navy as Marine Students.

Loads Trained by Other Services, FY 1976
(Active and Reserve Component)

	Trained By Other Service	Total Parent Service Loads	Percent Trained By Other Service
Specialized Skill Training			
Army	1,801	59,609	3.0
Navy	811	39,798	2.0
Marine Corps	3,812	11,343	33.6
Air Force	1,068	29,715	3.6
Flight Training			
Marine Corps	609	919	66.3
Air Force	49	2,683	1.8
Professional Development Education			
Army	197	4,544	4.3
Navy	581	3,813	15.2
Marine Corps	134	852	15.7
Air Force	258	5,076	5.1

About 5.3 percent of all DoD Specialized Skill Training is conducted outside the parent Service. The Marine Corps makes the greatest use of other Services to provide Specialized Skill Training to its members, particularly through training performed for it by the Navy. All Marine Corps Undergraduate Pilot and Undergraduate Navigator Training is conducted by the Navy; all Air Force Undergraduate Helicopter Pilot Training is conducted by the Army.

An important portion of other-Service training in Professional Development Education is in the intermediate and senior professional military schools. These two subcategories each include joint schools (Armed Forces Staff College, National War College, and Industrial College of the Armed Forces), and each of the included Service schools train members of other Services. This level of individual training and education contains the most notable examples of the "cross-fertilization" inherent in joint training -- that is, the joint education of relatively senior officers which leads to interservice understanding and operational coordination.

Consolidation of Training Activities. The major instrument for cooperation and course consolidation in training among the Services is the Interservice Training Review Organization (ITRO). This organization, headed by the training chiefs of each of the four Services and operating through a structure of committees with representation from each Service, has been in operation since September 1972. During FY 1974, ITRO concentrated its efforts on courses supporting the 27 enlisted occupational speciality subgroups which preliminary analysis indicated had the greatest potential for consolidation. Courses in 10 of these subgroups have been approved for consolidation; 17 subgroups are still in various stages of analysis. The following are examples of approved actions:

- Training of Marine Corps tank crewmen and leaders, with an annual student input of over 400, has been consolidated with the similar Army courses at Fort Knox, Ky.

- Training of Marine Corps and Air Force construction equipment operators has been merged with 12 Army courses at Fort Leonard Wood, Mo. Expected annual student inputs are 3,300 Army, 400 Marine Corps and 200 Air Force.

- The ITRO analysis of data processing courses indicated that the existing facilities of any single Service were not large enough to accommodate the total programmed student load. Therefore, the following conditions were arranged.

  1. Navy and Air Force IBM 360 training with the Marine Corps at Quantico, Va.

2. Marine Corps electronic accounting machine training, and Air Force UNIVAC 1500 training, with the Navy at San Diego.

- The Air Force and Navy consolidated basic law enforcement training at Lackland AFB, Texas; the Army and Marine Corps consolidated similar courses at Ft. Gordon, GA. All four Services joined in consolidated courses in traffic management, corrections, investigations and military working dog training. Total annual student inputs for all these courses will be over 13,000.

ITRO estimates that its actions during FY 1974 will result in annual recurring savings of about $1,300,000, compared to savings of about $480,000 from actions the previous year.

The ITRO is currently analyzing consolidation potential in flight and medical training as well as continuing its review of Specialized Skill Training courses.

Effective Structuring of Training

The training of military personnel in required military skills is conducted through one of three general approaches: formal school training, on-the-job training (OJT), or abbreviated formal training followed by a period of learning on the job. An effective and efficient training program makes use of the optimum mix of these approaches. The approach used in any given course depends on a variety of factors, the most important being the complexity of the skill. The following discussion focuses on Initial Skill Training, although the principles apply in much the same way to other types of training.

It is the policy of all the Services to restrict formal Initial Skill Training to the minimum amount and content that the trainee needs to be productive in his or her first assignment. This principle, in practice, can focus either on the individual trainee or on the course.

All the Services make use of some of the many forms of self-paced instruction or other procedures which allow quick learners either to finish a course in a shorter period or to be available as assistant instructors to help their slower classmates. With regard to course length and content, the effort is on tailoring the course to match the skills which are needed to make the trainee productive at the apprentice level in the first subsequent assignment. Tasks which can be learned on the job can be eliminated from the formal course; instruction in more advanced tasks can be deferred either to on-the-job training or additional formal training, which would generally be scheduled only after the member joins the career force.

The standard technique for achieving this objective is job task analysis. In applying this technique, the specific tasks that make up a job are identified, and the course which provides training for the job is then designed to train personnel to perform the tasks which require school training. Through this process, formal training, learning on the job, and job performance can be brought into an optimum balance.

Training through experience on the job, as opposed to formal school training, has always been used extensively by all of the Servies. In fact, the majority of training of enlisted personnel after their initial entry training is properly classified as on-the-job training. A basic tank crewman, for example, will ordinarily progress to tank commander, and even to platoon sergeant, by learning through experience, with little if any additional formal school training in his skill. An officer platoon leader will progress in the same way to company executive officer, battalion staff officer, or, in some cases, company commander. In both instances, the service member uses the formal training he received upon entering the service as a foundation for mastering more advanced skills and assuming greater responsibilities. This very large amount of on-the-job training goes on routinely and is not readily apparent.

The more visible portion of OJT is that which substitutes, in full, for existing formal school courses, especially Initial Skill Training. In FY 1976, the following proportions of active force Recruit Training graduates will be assigned directly to units, either to learn a skill on the job or to make use of a skill gained before entering the service: Army, 6 percent; Marine Corps, 36 percent; Air Force, 8 percent. The Navy does not ordinarily send Recruit Training graduates directly to duty assignments; however, 30 percent of Navy's Recruit Training graduates will receive only short Apprenticeship Training courses, averaging about two weeks in length, before moving to assignments in operational units for further training on the job.

Several systems are used by the Services to manage the training of OJT trainees in units. In the most controlled system, a prescribed syllabus is followed which combines supervised study and formal classes with practical work on the job. At the other extreme, the trainee may simply enter his new job, learning by doing the job with the help of supervisors and peers. Instructional devices, such as the Army's Training Extension Course (TEC) program, described in this chapter in the section on training technology, may be used to supplement the training. The mix of training methods used will depend on such factors as the complexity of the skills and the aptitude of the trainee. When the unit commander judges that the trainee has reached a sufficient level of proficiency, the trainee is awarded an occupational speciality code, and the period of OJT as a substitute for formal training can be considered to be completed.

The chief advantages of this type of OJT are that it makes it possible for fewer resources to be allocated to the conduct of formal training, and that the trainee is assigned to an operational unit in minimum time, allowing the possiblity for some effective utilization while the individual is still in training status. Based on past experience, it is clear that it is possible to conduct more OJT of this type in units than is done at present, at least in peacetime; but it is much less clear that it would be wise, or even cost-effective, to do so. OJT as a substitute for formal training has many disadvantages.

- An OJT trainee frequently does not reach the level of job proficiency achieved by a graduate of formal training. Since his or her job knowledge may be uneven in quality, subsequent schooling may be required to make up for the deficiencies.
- OJT is not "free," and may be more expensive than formal training. It is frequently more efficient to train a class, using fully qualified instructors with all appropriate equipment and instructional aids, than to divert the time of supervisors to train one, or a small group, of trainees in a unit. An additional cost is exacted by the fact that the school-trained member becomes a productive asset to the unit in a short time, the OJT member only after a considerably longer time. The differential time during which the OJT trainee is a detriment rather than an asset may be appreciably longer than the time that would have been required to put him or her through formal training.

- An additional cost is imposed by the effect on unit readiness of the additional mission of conducting OJT, since the trainees are not productive and effort must be diverted to train them. In addition, new accessions, under current law, are not deployable until after four months of training; some OJT trainees therefore could not deploy with their units in an emergency.

- OJT is difficult to adapt to the more complex skills or to skills which are distributed on the basis of one or two per operational unit or ship. OJT is also a dubious training method in skills which involve handling dangerous materials or expensive equipment; an OJT repairman may ruin more than he repairs.

The experience of the Services strongly indicates that the most effective use of OJT is as a means of follow-on training to broaden and perfect skills which have first been introduced through compact, well-engineered formal courses. As an example, a recent Navy study of the marine propulsion apprentice training program demonstrated that 25 percent of the program could be transferred to OJT. It is anticipated that OJT in this form, rather than as a full substitute for formal training, will receive primary emphasis in the future.

In another type of course restructuring action, the Army is currently implementing the One Station Training (OST) concept as an improved means of managing initial entry training for enlisted personnel. The purpose of OST is to minimize turbulence during this important period of training. Under the OST concept, a skill area for enlistees will be designated immediately upon enlistment. Many enlistees will then receive both Recruit and Initial Skill Training at a single installation, rather than at two different installations. OST also supports the concept of a "professional home" for each branch of the Army, offering training at all skill levels at one installation for each branch. OST is being put into effect in stages between FY 1974 and 1978 in consonance with realignments of the training establishment under the Army's long-range stationing plan.

Progress in Use of Training Technology

The Military Services have been leaders in the development and use of training technology for many years. Training technology is used to improve the quality of training and, in some cases, to provide instruction which cannot be provided any other way. It is also used to provide training of equal or higher quality at lower cost, or to allow savings in student time or instructor or support manpower. The use of training devices, such as flight simulators, may reduce fuel or other operating costs for the actual equipment for which the devices provide simulation. The goal of the use of training technology should be to seek the appropriate blend of these objectives. Any given use may satisfy one, or in some cases all, of the objectives.

The largest current effort in the Department of Defense in the application of technology to training is in flight simulation. The use of sophisicated flight training devices can improve training while reducing aircraft operating, maintenance and spare parts costs and the consumption of fuel.

The application of modern simulation techniques is illustrated by the instructional system for the Navy's newest carrier-based anti-submarine warfare aircraft, the S-3A. At the present time, the S-3A has one of the most highly developed and integrated operational flight training systems in the current inventory. The simulator has a motion base which simulates the actual motion of the aircraft in response to manipulation of the controls by the pilot. It also has a full array of instruments for each crew member which provide the same information that would appear on the instruments on the operational mission. A visual attachment, which will provide the pilot the same view of the surrounding air and earth which he would see during a mission, is under development. This training device is the core of an instructional system which is capable of taking a crew, individually and collectively, from self-paced classroom instruction through integrated, mission-oriented crew training in a simulator. The simulator is designed to train four-man crews. The crew stations and functions simulated include the pilot, co-pilot, tactical coordinator (TACCO), and the sensor operator (SENSO).

The S-3A simulator has four basic modes of operation to allow it to be used either as a trainer for individual crew members or as an integrated weapon system trainer for the entire crew. The tactics section of the device can be utilized independently of the flight section. This permits training the TACCO and SENSO without a pilot and co-pilot. Similarly, the flight section can be used by the pilot and co-pilot without a TACCO or SENSO. A third mode permits simultaneous use of the two sections for separate and independent training missions. Finally, the fourth mode integrates all crew postions into a single and coordinated device capable of simulating typical antisubmarine missions.

The training device for the S-3A is used as part of a highly developed training program. The training device is used both to qualify new or replacement crews in the S-3A and to maintain the proficiency of fleet crews who have returned from sea duty and are preparing for their next tour. The realism of the device is such that much of the tactical team training can be completed in the trainer rather than actual aircraft. While it is an expensive device, costing on the average approximately $10 million per device, the trainer provides for improved training and will permit significant annual savings in crew replacement and fleet squadron training flying hours.

The Services presently have very few flight simulators which compare to the simulator for the S-3A in training effectiveness and potential for savings. In consequence, a concentrated effort was initiated during FY 1974 to develop a comprehensive program to develop and procure simulators. Substantial funds were appropriated in FY 1975 for flight simulators which will improve training and decrease the use of operational aircraft in the training mission. The FY 1976 President's budget continues that effort for those aircraft with large total annual fuel requirements, such as the F-4 (all Services) and the heavy, multi-engine aircraft, such as the B-52, KC-135, C-5, C-130 and C-141.

As new simulators become available, the Services will revise and update their training courses to capitalize on the opportunities for more effective training and the potential for reduced costs, student time and staff manning.

Several recent developments in training technology with potential for widespread use should be given special recognition. The Air Force Advanced Instructional System incorporates the use of both computer-assisted instruction and computer-managed instruction in a multi-media training environment which may eventually allow significant substitution of educational hardware for instructors. This system applies numerous audio-visual aids suited to the individual needs of the student, and manages the student's progress to the point of prescribing a specific lesson sequence based upon the student's performance. This revolutionary concept in training may lead to significant reductions in both direct and indirect training costs, including manpower savings. To date, 830 students have participated in a partial system test; 11,000 fewer instructional hours were consumed than would have been needed under the current standard teaching procedures. Some of these savings will be offset by the substantial investment required to train personnel to conduct the training and to develop software for the courses to be taught.

Another education system, Programmed Logic for Automated Teaching Operations (PLATO IV), is currently undergoing development and test by the Air Force for use in technical training. PLATO is primarily a lesson delivery system which uses a display panel to present materials which are stored either in a central computer system or on micro-fiche for graphic illustrations. The system provides self-paced instruction, using branching logic to allow the student to review or repeat previous portions of the instruction. This improved teaching format is expected to show a significant reduction in training time required per student and possible savings in instructors.

Computers can be used to replace men, fuel and equipment in some areas of the training processs. An example is the Naval Warfare Gaming System (NWGS), a war gaming simulator at the Naval War College. NWGS provides a human-oriented interactive war gaming system to train naval officers for higher level commands, develop and evaluate contingency plans, and rehearse planned exercises as part of the War College curriculum. In addition to improving student training through simulating selected types of warfare, the system provides support for strategic, tactical, and analytical games scheduled by fleet commanders and other afloat or headquarters elements of the Navy.

The Army's Training Extension Course (TEC) Program is built around a relatively inexpensive, visually based system which can be used in individual or small unit training. Employment of TEC lessons permits individually paced learning through lessons which combine programmed audio-visual materials with aurally guided hands-on training for instruction in weapons or other subjects involving the operation or maintenance of equipment. The TEC system can be used for initial, follow-on, or refresher training, and has great potential for use in operational units to supplement on-the-job training and to improve unit readiness, both in the active Army and the reserve components.

It must be recognized that, while instructional methods based on modern technology offer very substantial benefits, caution must be exercised in attempting to draw definite conclusions about the benefits available from systems still in concept, under development, or not yet proven through use. Because of these uncertainties, the extent and nature of future benefits remains conjectural. However, experience to date indicates that new advances and innovations in training technology can make significant contributions in terms of the objectives of Defense training programs: improved training, better use of resources, and a high level of mission readiness in the force.

XII

RESERVE COMPONENTS TRAINING

In addition to training members of the active forces, the Service training establishments also train members of the Reserve Components. Reserve Component training, as part of individual training and education, involves Reservists and Guardsmen who are on active duty for formal school training. It does not include training of Reserve Component members who may receive training while on extended active duty (this training is included in the active force aggregates), the individual training of Reservists or Guardsmen conducted by the Reserve Components themselves, or annual active duty for training which does not involve formal school courses conducted by active Service individual training organizations. Reported loads do not include any formal school training received by an individual while not in active military status; as a minor exception, some Reserve and Guard technicians attend military schools in Civil Service status.

The purpose of this chapter is to summarize the amount and types of training of Reservists and Guardsmen which are conducted by the active training establishments. The training loads discussed in this chapter are included within the loads attributed to the various Reserve Components in the previous chapters.

Training of members of the Reserve Components will comprise approximately 10 percent of all individual training and education in FY 1976-77. Training loads for each of the Reserve Components for each of the five major categories of training for FY 1976 are shown in the following table.

Training Loads, Reserve Components, FY 1976[a/] [b/]

Component	Recruit	Officer Acquisition	Specialized Skill	Flight	Professional Development	Total
Army Reserve	2,490	131	4,600	15	123	7,359
Army National Guard	4,034	2	5,644	36	72	9,788
Naval Reserve	337	126	1,165	-	33	1,661
USMC Reserve	1,763	347	641	-	18	2,769
Air Force Reserve	364	12	347	29	58	810
Air National Guard	644	1	1,168	100	39	1,952
Total, Reserve Components	9,632	619	13,565	180	343	24,339

a/ Training of ROTC cadets and Health Professional Scholarship Program participants not included.

b/ Loads in this table are a summary of Reserve Component load displayed previously in this report, and are not additive to them.

The great majority of training of Reservists and Guardsmen is in Recruit and Specialized Skill Training. Within Specialized Skill Training, most of this training is in Initial Skill Training for enlisted personnel. The combination of Recruit and Initial Skill Training for enlisted personnel, including Reservists and Guardsmen, provides them basic qualification training which transforms the untrained civilian into a service member with a useable skill.

Enlisted members of the Reserve Components without prior service receive the same basic qualification training as active service members. Each non-prior service enlistee in the Reserve Components must, by law, undergo a minimum of four consecutive months of active duty training. This statutory requirement, in practice, is carried out by sending the new recruit through Recruit Training and on through Initial Skill Training. All non-prior service Reserve Component recruits receive Recruit Training, including, for Army Guardsmen and Reservists, additional civil disturbance training. After graduation, trainees proceed to Initial Skill Training in their occupational specialty. This may consist of a course in a Service school or Advanced Individual Training at an Army training center. If a course in the proper skill is not available the trainee may be assigned to on-the-job training. The actual length of this training, in comparison with the statutory four months, varies from four to 12 months, depending on the occupational specialties involved.

The following table summarizes load data for entry-level Reserve Component basic qualification training for FY 1976:

Enlisted Entry-Level Training, Reserve Components, FY 1976

	Inputs	Outputs	Loads
Recruit Training	72,474	66,120	9,632
Initial Skill Training	59,420	54,179	9,854
Totals	131,894	120,299	19,486

Entry-level training of Reserve Component members accounts for 13 percent of all Recruit Training and 11 percent of all Initial Skill Training (Enlisted) programmed in the Department of Defense for FY 1976.

Although entry-level training for enlisted personnel makes up about 80 percent of total Reserve Component training loads, Reserve and Guard officers and enlisted personnel beyond the initial entry stage also are trained by the active establishment. The majority of this training is at the more advanced levels of Specialized Skill

Training, and fills the same demands for skill progression or new equipment training that these types of training provide for active members. Reserve Component participation in Flight Training is minor, since almost all aviator requirements in Reserve Component units are filled by experienced aviators who join after extended service in the active components. Reserve Component participation in the professional military schools portions of Professional Development Education accounts for seven percent of total DoD officer training at the basic, intermediate and senior levels and about six percent of Enlisted Leadership Training.

Reserve Component personnel participate in a variety of nonresident courses sponsored by Service schools; Reservists and Guardsmen make use of these training opportunities on the same basis as active personnel. For many Reserve and Guard officers, consideration for promotion depends upon successful participation in Professional Development Education programs.

Beyond the training covered in the training loads, the active training establishment makes other valuable contributions to the state of training of the Reserve Components. Perhaps the most important is realized through former active members who join the Reserve Components after having been trained on active duty. The Reserve Components also receive graduates of Army and Air Force ROTC who are not called to extended active duty, although the numbers involved are much lower at present than during the period of the draft and high levels of participation in ROTC.

In summary, training of members of the Reserve Components forms a significant portion of the workload of the active training establishment. Particularly at the entry level, this training is indispensable to the readiness of individuals and organizations of the Reserve Components and to the realization of the Total Force concept.

APPENDIXES

APPENDIX A

SUMMARY TRAIL OF TRAINING CATEGORY REALIGNMENTS

Training Segment	FY 1976 Budget Justification	Military Manpower Training Report
1. ROTC Programs	Officer Acquisition Training	Excluded from Loads
2. Health Professional Scholarship Program	Professional Education	Excluded from Loads
3. Officer Candidate Schools	Specialized Training	Officer Acquisition
4. Other Enlisted Commissioning Programs and Medical Officers Acquisition Programs	Professional Education	Officer Acquisition
5. Non-flight-related Aviation Training	Flight Training	Specialized Skill
6. Senior Noncommissioned Officers Academies	Specialized Training	Professional Development
7. Army Advanced Individual Training conducted in Training Centers; Navy Appreticeship Training	Recruit	Specialized Skill

Category Changes in Training Report for FY 1976 From Training Report for FY 1975:

1. Enlisted Leadership Training, except that for senior NCO's, has been transferred from Professional Development Education to Specialized Skill Training. However, in some cases, NCO formal training is carried in mission-oriented accounts (e.g., Strategic Air Command NCO schools) rather than in Program VIII-T.

2. Marine Corps Basic Officer courses have been transferred from Professional Development Education to Specialized Skill Training.

These changes have been made to classify these activities more accurately.

APPENDIX B

DETERMINING TRAINING REQUIREMENTS

All discussions of the determination of training requirements in this report reflect a generally uniform approach. The following overview of the methodology for assessing and calculating training requirements is provided as a framework for understanding this approach. As noted, details in calculation may differ to some extent among the Services and among the training categories.

Requirements

All training is accomplished to satisfy the need for personnel with certain types and levels of skills to man the approved or projected force. The Services, over the years, have developed detailed, systematic methods of determining the manpower needed to man and support the forces. The Manpower Requirements Report discusses this process. From these force requirements for manpower, the need for trained personnel with specific skills can then be derived. For example, a given force structure establishes the number of trained enlisted personnel needed. The number of authorized positions within that force structure for radar technicians establishes the basic requirement for trained personnel with that skill. This process is reiterated on a phased basis for all skills and skill levels for each Service, for both officer and enlisted skills. The total of all personnel in all skills needed to perform all the jobs in the force at a point in time represents the total requirement for trained manpower projected for that date.

Inventory Projection

The requirements identified through this process must be measured against the available assets, in terms of trained personnel on hand in each skill and skill level. From this asset base, estimates are made of *how many trained personnel* will be available at various points in the future. These estimates take into account probable rates of change to the current inventory -- through reenlistment, promotion, discharge, death, retirement, or other causes. These estimates are based on the best historical information available, tempered by judgment of how in the future personnel policies, the state of the economy, and other factors, many of them difficult to predict, will affect the probabilities that a trained individual will remain in the Service. A comparison of skill requirements and skill inventory projections, over time, establishes the extent of shortage or surplus likely to exist in each skill area by month and year. Adjusting the inventory may entail retraining personnel who are in surplus skills, but to a much greater degree, adjustment is likely to require the training of new accessions at entry level in shortage skill areas. The process places a demand on the personnel management and training establishments continually to analyze information about attrition as it occurs, by skill and skill level, in order to produce the right number of trained personnel with the proper skills needed to restore and maintain the balance of the skill inventory. The workload thus placed on the training establishment is detailed by graduates needed from courses of various lengths and is measured in terms of average student load, or "training load."

Average Training Loads

Resources (men, money, and materiel) needed for any particular category of training vary with the number of students undergoing training at any given time. Facilities must be constructed and maintained to accommodate these students in training. The training establishment must maintain a sufficient staff of qualified instructors to conduct instruction for the "load" of students. Students and Trainees, as described in Chapter IX, "Individuals", of the Manpower Requirements Report, must be programmed to account for the fact that these personnel are in formal school training and are not available for duty with operational units. All of these personnel must be paid, housed, and supported. The basis for establishing these resource requirements is the "average training load."

The aggregate training load of courses of instruction within a given training category or sub-category is computed in accordance with the following formula, except as noted:

$$L = \frac{\sum_{i=1}^{n} \left(\frac{E_i + G_i}{2} \right) t_i}{y},$$

where L is Average Training Load,

i is a class (1, 2, . . . n) scheduled for a training course within the training category under consideration,

E is number of expected entrants to scheduled class i,

G is number of expected graduates from scheduled class i,

t is the calendar length of the syllabus of class i, and

y is the length of a calendar year (or quarter-year, in the case of FY 197T) expressed in the same units as t (1 year = 12 months = 52 weeks = 365 days).

Fractions of carry-over classes conducted during the year are included as though they were separate classes. However, individuals remaining in a class at the end of a period are not counted as graduates, nor are individuals already in a class at the beginning of a period counted as entrants except for purposes of computing training loads for these fractions of courses.

The training load for a category or sub-category of training (e.g., Specialized Skill Training or Functional Training within that category) is the sum of the loads computed for all classes of courses within the category or sub-category.

This method of computation implies "straight-line" attrition, under an assumption that net class attrition occurs at a constant rate during a course. When attrition patterns experienced characteristically produce a different distribution of attrition (if, for example, course average enrollees are 0.96 of entrants, although graduates are 0.95 of entrants, with attrition tending to take place early in the course) the more appropriate attrition pattern is used in lieu of the term $\frac{E + G}{2}$.

Since attrition varies for different training programs and is not always spread uniformly throughout the length of a course of training, determining training loads becomes a complex problem in estimation. This process of estimation involves two related factors.

First, across the spectrum of training programs that are within the scope of this report, attrition varies from nearly zero to as high as 25 to 30 percent. Most officer Professional Development Education programs have practically no attrition. For FY 1976, the Services estimate that about 7 percent of new recruits, on a DoD average basis, will not complete Recruit Training because they will be found in the course of undergoing training not to have the mental or physical qualifications, or the motivation, for military life. Of these, some will fall ill or go absent without leave. Attrition rates in Specialized Skill Training vary widely, with the longer and more demanding courses tending to have higher losses. Pilot training is near the top of the scale in attrition; the higher rate of losses is based on lack of aptitude or motivation for flying, accidents, and similar causes which are intensified in this type of training. While historical data provide a basis for projecting attrition rates for all types of training, there is a considerable possibility for error based on variance in such factors as student quality and motivation.

A second necessary step in evaluating the effect of attrition is to estimate the phasing of attrition for each training program. In some courses, attrition tends to be higher in the early stages of a course when the inept and those lacking motivation are discovered. In other courses, the bulk of attrition may occur toward the end of the course. The patterns of losses vary widely among types of training and, to the detriment of precise planning, over time. The complexities of the attrition variable make it necessary for the Services to use computer simulations in their training load calculations which take into account the rates and time-phasing of attrition.

An additional variation is introduced into the conceptual process of forecasting requirements and planning training loads as described above by the seasonal and cyclical nature of new accessions to the Services. Inputs to many of the more stable training programs -- Professional Development Education, Flight Training, the Service Academies, and the most advanced portions of Specialized Skill Training -- are readily predictable. Inputs to the training programs which are dependent on new accessions, Recruit Training and Initial Skill Training for graduates of Recruit Training, are considerably more volatile. The volume of inputs to these types of training depends on such intangibles as job opportunities in the civilian economy and the decisions of young people to enlist, delay enlisting, or not enlist. Moreover, enlistments are seasonal in nature, following a long-term pattern of "good" and "bad" recruiting months, whereas phased requirements move independently of these seasonal patterns. As a result, training loads for the initial active duty training programs are generally based on a compromise involving the timing of predicted enlistments and the capacity of the training base as well as when the new personnel are needed to fill vacancies in the job structure. Most of the courses in these programs are relatively short, and program adjustments can readily be made.

APPENDIX C

CIVILIAN TRAINING

This Military Manpower Training Report explains and justifies military student training loads required to support military manpower positions of the Military Services. The report also addresses the workloads, and resources required for their accomplishment, of the military training and education organizations of the Services. These workloads differ from the military student training loads requested to be authorized because they include the training of non-DoD personnel (e.g., the U.S. Coast Guard of the Department of Transportation), foreign military personnel, and U.S. civilians, as appropriate and required.

This Appendix summarizes the workloads accomplished by the Military Departments which are attributable to the training of U.S. civilians. For the most part these civilians are employees of the Department of Defense receiving Specialized Skill Training in logistical or support skills; a small but significant fraction are career civil servants attending courses with their military counterparts at the Senior Service Colleges. (Some of the latter may be State Department foreign service officers, or others whose attendance facilitates breadth of seminar studies of national defense topics and understanding among the departments of the government.)

Civilian attendees account for less than one percent of total DoD training workloads. However, this training serves very important needs -- for example in assuring currency of aircraft maintenance skills for civilians as well as their military counterparts.

The same considerations which foster consolidation of training among the Services (see Chapter XI) serve to encourage the participation of civilians in courses conducted by military training and education organizations instead of establishing and maintaining duplicative courses for civilians in civilian training organizations.

The civilian workloads in the attached table, as has been noted, represent only that portion of civilian training which is accomplished by military training and education organizations. Comprehensive data on all civilian training and education activities are provided routinely by the Military Departments to the Civil Service Commission, which reports on these activities.

The following table summarizes civilian training workloads for FY 1974-76. These data for FY 1976 are included in the training workload table on page VIII-5 of this report.

Civilian Training Workloads
(000)

	FY 74	FY 75	FY 76
Army			
Specialized Skill	0.8	0.7	0.7
Professional Development	0.1	0.1	0.1
Total	0.9	0.8	0.8
Navy[a]			
Specialized Skill	0.3	0.1	0.1
Professional Development	0.2	0.2	0.2
Total	0.5	0.3	0.3
Air Force			
Specialized Skill	0.4	0.4	0.4
Flight	*	*	*
Professional Development	0.2	0.2	0.3
Total	0.6	0.6	0.7
DoD Total	2.0	1.7	1.8

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*Less than 50.

[a] Includes one unit load accomplished by Marine Corps in FY 75.

APPENDIX D

SUMMARY OF TOTAL FUNDING FOR INDIVIDUAL TRAINING AND EDUCATION, BY SERVICE AND APPROPRIATION, FY 1974-76, AND 7T

($ Millions)

Appropriation	FY 74	FY 75	FY 76	FY 7T
	Army			
Operations & Maintenance, Army	$ 856.0	$ 950.1	$ 993.6	$250.7
Military Personnel, Army	1,610.3	1,672.8	1,582.1	389.3
Reserve Personnel, Army	39.1	54.6	62.8	18.3
National Guard Personnel, Army	82.4	107.8	125.6	31.9
Aircraft Procurement, Army	13.3	3.9	9.1	1.4
Missile Procurement, Army	17.7	20.5	28.1	1.6
Procurement Weapons & Tracked Combat Vehicles, Army	4.2	6.2	25.5	7.7
Procurement of Ammunition, Army	1.0	1.0	1.5	0.4
Other Procurement, Army	18.4	27.9	71.0	8.1
Military Construction, Army	270.6	160.7	201.6	-
Total Army	$2,912.9	$3,005.5	$3,100.8	$709.4

Note: See notes following DoD totals on a subsequent page.

Appropriation	FY 74	FY 75	FY 76	FY 7T
Navy*				
Operations and Maintenance, Navy	$ 352.4	$ 428.2	$ 441.1	$ 115.9
Military Personnel, Navy	1,070.3	1,157.2	1,156.2	304.1
Reserve Personnel, Navy	6.1	10.9	7.1	2.8
Aircraft Procurement, Navy	0.4	7.4	39.4	15.4
Other Procurement, Navy	14.8	31.6	8.3	4.1
Military Construction, Navy	60.4	49.4	48.7	-
Total Navy	$1,504.4	$1,684.7	$1,700.8	$ 442.3
Marine Corps*				
Operations and Maintenance, Marine Corps	$ 44.8	$ 44.9	$ 48.5	$ 12.4
Military Personnel, Marine Corps	346.4	360.3	350.2	88.7
Reserve Personnel, Marine Corps	12.1	16.5	21.0	8.7
Procurement, Marine Corps	0.8	2.8	1.5	0.7
Operations and Maintenance, Navy	7.0	9.6	10.3	2.6
Total Marine Corps	$ 411.2	$ 434.1	$ 431.5	$ 113.1

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* These figures reflect funding practices within the Department of Navy (e.g., Navy funds for aviation fuel used by the Marine Corps as well as for that used by Navy). Thus, Service figures may not always be relatable to training activities of the respective Service, although the Service totals taken together relate to the total Department of Navy individual training and education loads requested.

Appropriation	FY 74	FY 75	FY 76	FY 7T
Air Force				
Operations and Maintenance, Air Force	$ 472.8	$ 556.1	$ 579.6	$ 150.1
Military Personnel, Air Force	933.3	934.1	925.8	230.7
Reserve Personnel Air Force	9.5	10.3	13.0	4.0
National Guard Personnel, Air Force	13.9	15.8	19.9	5.5
Aircraft Procurement, Air Force	22.4	69.7	59.9	14.7
Other Procurement, Air Force	3.4	4.6	6.5	0.6
Military Construction, Air Force	24.4	54.3	36.4	-
Total Air Force	$1,479.7	$1,644.9	$1,641.1	$ 405.6
Total Department of Defense	$6,307.1	$6,768.9	$6,874.2	$1,670.4

Note: Totals may not add due to rounding. These totals exclude funding for individual education and training programs for which loads have not been requested and for which funds were not shown in the category funding tables in Chapter X (e.g., ROTC). The funding for such excluded programs is summarized in the following table.

SUMMARY OF FUNDING FOR SUPPLEMENTAL INDIVIDUAL TRAINING AND EDUCATION PROGRAMS NOT REQUIRING AUTHORIZATION OF AVERAGE MILITARY STUDENT TRAINING LOADS a/

($000,000)

Appropriation	FY 74	FY 75	FY 76	FY 7T
	Army b/			
Operations and Maintenance, Army	$ 70.4	$ 80.6	$ 88.0	$ 33.3
Military Personnel, Army	42.5	45.8	44.8	11.2
Reserve Personnel, Army	31.6	36.2	36.2	11.1
Other Procurement, Army	*	*	0.2	*
Military Construction, Army	1.0	*	1.2	*
Total Army	$145.5	$162.6	$170.4	$ 55.6

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a/ This funding has been excluded from the preceding table and is shown here for completeness even though the supplemental programs here do not require authorization of loads (a) because participants are not active-duty members or are not full-time participants in training, or (b) to avoid double-counting.

b/ Includes ROTC, Armed Forces Health Professional Scholarship, Flight Familiarization, and Off-Duty and Voluntary Education programs.

Appropriation	FY 74	FY 75	FY 76	FY 7T
	Navy c/ d/			
Operations and Maintenance, Navy	$27.7	$31.5	$36.2	$12.6
Military Personnel, Navy	7.5	8.1	8.2	2.1
Reserve Personnel, Navy	21.1	23.6	24.6	9.0
Total Navy	$56.3	$63.2	$69.0	$23.7
	Marine Corps c/ e/			
Operations and Maintenance, Marine Corps	$ 3.1	$ 3.6	$ 3.9	$ 1.3
Military Personnel, Marine Corps	1.2	1.8	1.8	0.5
Reserve Personnel, Marine Corps	*	0.1	0.1	0.1
Total Marine Corps	$ 4.3	$ 5.4	$ 5.7	$ 1.8

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* Less than $50,000

c/ The note on page D-2 applies to this table also.

d/ Includes ROTC, Armed Forces Health Professional Scholarship, Flight Familitarization, and Off-Duty Education programs.

e/ Includes NROTC support, Marine Corps Junior ROTC, Correspondence Courses, Flight Familiarization, and Off Duty Education activities.

Appropriation	FY 74	FY 75	FY 76	FY 7T
	Air Force f/			
Operations and Maintenance, Air Force	$ 22.4	$ 26.4	$ 27.3	$ 10.8
Military Personnel, Air Force	21.7	21.9	22.1	5.5
Reserve Personnel, Air Force	20.6	23.8	22.7	6.0
Total Air Force	$ 64.7	$ 72.1	$ 72.1	$ 22.3
Total Department of Defense	$ 270.8	$ 303.3	$ 317.2	$ 103.4

* *

Aggregate of Load-Related and Supplemental Individual Training and Education Funding	$6,577.9	$7,072.2	$7,191.4	$1,773.8

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f/ Includes ROTC, Armed Forces Health Professionals Scholarship, and Off-Duty Education programs.